THE VETERINARY RECORD

A Weekly Journal for the Profession.

No. 503. FEBRUARY 26, 1898. Vol. X.

Colic.

It is curious that the most common disease of working horses should be, perhaps, less understood than the majority of the ordinary complaints met with in veterinary practice. On another page will be found a note from Major Fred Smith, containing the remarkable statement that in the Army Remount Depôt there is no colic. During the past eleven years one case of volvulus, one of enteritis, and two of spasmodic colic is the total reported—and this in a large stud that has had during the same time over 3,000 cases of other sickness. The reason offered for the immunity by Major Smith is that they do no work, they are only exercised.

That work plays a great part in determining an attack of colic is well-known, but it has never before been so strikingly exemplified. The question arises, how does work act as an exciting cause? For one thing, it induces fatigue, and this impairs the digestive function. It also causes increased peristaltic action of the intestines, as is shown by the frequently repeated evacuations of the bowels of horses at work.

In the majority of fatal attacks of "colic," some so-called "twist" of the bowel is found on post-mortem examination. This condition occurs in scores of well authenticated cases where no rolling or other violent alterations of the position of the body have taken place. Too often the post-mortem examination is very perfunctory, and the appearance of a length of intestine totally discoloured is sufficient to confirm a diagnosis of "twist."

Discoloured intestine is of course due to some obstruction of the circulation, but it is not necessary that this obstruction should always result from torsion of the bowel or strangulation. It may be due to obstruction of the vessels by a blood clot. In the majority of fatal cases in which a "twist" is found, careful examination will reveal the existence of a mesenteric aneurism, the clot in which is full of small red strongyles. Now in embolism of the iliac artery violent exertion is required to produce lameness and the pain accompanying it is seen to be intense. Is it not reasonable to suppose that similar pain must accompany violent exercise when embolism of the mesenteric artery exists? And may not many cases of discoloured intestine be due solely to embolic plugging of a main artery supplying a length of intestine? Indigestible food, irregular feeding or watering, we know to be causes of colic, but embolism of intestinal vessels deserves more attention than it has received.

SOME ABDOMINAL TUMOURS.

By John Raphael McCall, Veterinary College, Glasgow.

The subject of abdominal tumours is one which affords plenty of scope for investigation, but unfortunately the condition is not very amenable to either medicinal or surgical treatment. Still the obscurity of the symptoms, the difficulty in diagnosis, and the not infrequent occurrence, especially in canine and feline practice, renders it of practical interest.

Although in some cases these tumours can be recognised by manipulation (per rectum in the larger and externally through the abdominal walls in the smaller animals) still in many cases you cannot arrive at a definite opinion.

On post-mortem examination of dogs which have died from other causes I have freqently found tumours present, most commonly in connection with the spleen or mesenteric glands. When in the spleen they vary in size from little pea-shaped nodules scattered here and there, to large tumours 3 or 4 inches in circumference, and are generally of a sarcomatous nature. Cancer in the stomach is occasionally met with.

The following are a few notes on two cases of abdominal tumours:

Round Celled Sarcoma in the Horse.

Subject.—A grey aged gelding of the Clydesdale breed.

History.—For several months had been gradually losing condition, appetite capricious, animal dull and languid, and subject to attacks of diarrhœa, ultimately he became unfit for work and the owner sent him for a run to grass.

When seen horse was emaciated, coat dry and unthrifty, eyes sunk and deep hollows over them, pulse slow, irregular and weak, temperature 99 2-5ths, visible mucous membrane pale and anæmic, and profuse diuresis present.

Treatment.—The horse was removed to the College Hospital and placed in a loose box, limbs bandaged, and warmly rugged, given gentle daily exercise, and treated with nerve tonics, stomachics, and potassium iodide to counteract the diuresis. This treatment continued for ten days checked the diuresis, but the appetite remained in abeyance.

Profuse diarrhœa now set in, the fæcal matter being of a greenish colour, and bad odour. My attention was now directed to the bowels, and on examination, per rectum, a firm mass could be felt in the sublumbar region as far forward as the hand could reach, irregular in outline, moveable, and about the size of a

man's head. This mass appeared to be either a concretion or a tumour, the evidence being in favour of the latter, as it was soft to the feel, and the history was unlike that of a concretion. With consent of the owner the horse was destroyed.

Post-mortem examination revealed a large tumour weighing 22½ lbs. in connection with the mesenteric lymphatic glands of the colon, attached to the cæcum and double colon by tough bands of connective tissue.

On section the tumour was seen to be divided into lobules, by strands of connective tissue passing inwards from the capsule, the tissue being of a pale yellowish pink colour, soft to the feel, but not very vascular. The kidneys were rather pale in colour, the other viscera appeared healthy. I took several small sections from various parts of the tumour, hardened them in methylated spirits and cut, stained sections with picro-lithium-carmine, and mounted in Canada balsam.

Microscopical examination showed the tumour to be a round celled sarcoma. At various points the amount of fibrous tissue present was considerable, here the differentiation of the proliferating connective tissue cells, from spindle cells into fibrils of the connective tissue bands could be plainly studied, the general appearance resembling closely that of a simple fibroma. At other points the tumour was seen to be actively growing, nothing but round proliferating cells with their large deeply stained nuclei could be observed, and at these points small blood vessels and hæmorrhages were numerous. No giant cells could be detected, nor could I see any secondary tumours in the abdominal cavity.

Tabes Mesenterica in the Cat.

Tuberculosis is met with frequently in feline practice, and is much more common than generally supposed; many deaths which are attributed to old age and other causes, being in reality the result of this disease. During the last few months several cases have come under my notice, the majority, unfortunately being only recognised on post-mortem.

Whether pulmonary tuberculosis or tabes mesenterica is most frequent I am not in a position to state, but in the majority of post-mortems conducted at the College the implication of the mesenteric glands was a marked feature, whether occurring in conjunction with pulmonary tuberculosis or alone; this, however, may only be a coincidence.

On 9th November last was called to see a grey and white tom cat, two years old. The history was that for a few weeks previously the cat had been dull and listless, lying all day in one position, and not eating well, his diet consisting chiefly of flesh food.

In appearance he was a large, strong animal and did not appear in delicate health. The abdomen was unusually large and pendulous, and on manipulation over the region of the kidneys the patient showed marked objections by using his claws, and on being restrained flinched and struggled on the least pressure. As the cat belonged to ladies, and assistance was required for a thorough examination, I advised them to send him to the College hospital for a few days, but they would not hear of parting with him under any consideration. Under these circumstances I prescribed a dose of Ol. Ricini, and less flesh to eat.

On 18th November (ten days later) was again called and found my patient altered for the worse; he had lost condition, was very languid, and vomited frequently during the day. I now insisted on his being sent to the College for examination, as I was suspicious of some grave disorder; and consent was latterly granted

On careful manipulation of the abdomen several large masses, irregularly shaped, and varying in size from a bean to a pigeon's egg, could be felt, more especially in the sub-lumbar region; they were freely moveable and resembled very much the feel of fœti. I reported to the owners the presence of intestinal tumours and advised that he should be destroyed, but they preferred taking him home and nursing him to the end.

A month later, 18th December, was again sent for and found puss *in extremis*, emaciation very marked, profuse diarrhœa, eyes sunk, gums pallid, and unable to stand. I administered a few drops of Scheele's hydrocyanic acid with a syringe.

Post-mortem.—On opening into the abdomen I was struck with the amount of subcutaneous adipose tissue present, emaciation being so general; there was a layer two inches in thickness. The lungs, heart, and spleen were perfectly healthy as far as the naked eye could detect. Liver congested and fatty, being a typical specimen of nutmeg or mottled liver. Kidneys both enlarged and waxy, very pulpy and pale. Intestinal mucous membrane gritty to the feel, and on microscopical examination showed tubercle nodules in various stages.

The mesenteric glands were markedly affected. On the intestinal mass being removed from the abdomen three large yellowish bodies could be plainly seen, the two largest measuring respectively four and three inches in circumference, and were associated with the mesenteric lymphatic glands of the colon and cæcum, their attachments to the mesentery producing a puckered appearance of the whole mass. Other two small glandular tumours were present about the size of a bean, one in the mesenteric glands of the small intestines, the other in the rectal lymphatics. On section these tumours were caseated and dried, and in some parts had a gritty feel, due to calcification.

The peritoneum was also the seat of a chronic tubercular peritonitis, nodules being numerous. These lesions seemed entirely confined to to the abdominal cavity, the thoracic viscera and pleura appearing perfectly healthy.

The subject of tuberculosis among cats is important from a medical as well as veterinary point of view. In large towns it appears prevalent, and it would be interesting if we could trace its origin. The fact of its occurrence as tabes mesenterica points to its originating by ingestion. Pulmonary tuberculosis in the the human subject is frequent in towns; possibly the cat may become infected by ingestion of the sputum from a phthisical patient.

On the other hand a cat suffering from pulmonary tuberculosis may transmit the disease to the human subject. When we recollect how close a companion

of the children the household cat is, how it is petted and fondled, and even in some instances allowed to sleep in close proximity to the children, it does not require a great stretch of imagination to conceive the probability of infection.

TWO OBSERVATIONS.

By Veterinary Major F. Smith, A.V.D.

I.—Painless Neurectomy.

I do not know how far the excision of nerves under local anæsthesia is generally practiced, my own experience using cocaine was extremely gratifying, but some sensation was experienced when the nerve was divided. In the method I am about to describe there is absolutely no sensation whatever, and the animal is operated upon standing.

The principle of the process is very simple, incision through the skin is rendered painless by cocaine; a little more cocaine may be used in exposing the nerve, under which a thread is passed and the dissection from its bed carried out. Under and around the nerve is then placed a small piece of cotton wool, previously dipped in the alkaloid of aconite (aconitia), and while this is acting the dissection on the opposite side is performed, the cotton wool being similarly arranged. The nerve first exposed can now be divided without the slightest sign of pain and the wound closed. The other nerve is similarly treated.

It must be clearly understood that the whole of the above process is carried out with the animal standing, and if there are any who, like myself, dislike and avoid as far as possible casting horses for operation, they will welcome a method which enables them to perform while the patient is quietly standing, that which for the time it lasts is probably the most painful operation in veterinary surgery.

The solution of aconitia employed is one grain in one ounce of water.

II.—A Cause of Colic.

We have still something to learn regarding the causes of colic as I think the following facts will show, and from which each and all of us can draw our own conclusion.

In this Journal I pointed out some time ago, how frequently cases of colic occurred at or about one particular hour of the day, and figures were quoted representing the observations of some years. It was found, in fact, that colic was more frequent in the afternoon than at any other time of the day.

The important fact I have now to chronicle is that in the Remount Depôt there is no colic, and there never has been. I have gone through the returns for the past eleven years and here are the results:—1 volvulus, 1 enteritis, 2 colic spasmodic. The volvulus occurred in a troop horse which marched to the depôt and died on arrival. The absence of digestive trouble is the more remarkable, when we consider that during the eleven years 3,300 cases of sickness appear on the books.

What is the explanation of this remarkable immunity? The one I offer is that the horses do no work. Their system of stable management is the same as that existing throughout the Army, but being young horses they only go to walking exercise for about one and a half to two hours in the morning, and are then done for the day.

Accordingly we must look to work in some form or other as the chief cause of colic and volvulus; it may be by working on a full stomach, or in other ways. This is the conclusion forced on me, and I can now quite understand why colic is more frequent in the afternoon than at any other time in the 24 hours.

CLINICAL NOTES.

By J. G., Belfast.

A Mixed Case.

Black harness gelding showed symptoms of colic, with a queer backward motion on the 7th inst., almost convalescent at time of writing.

Particulars:—I was called on above date to see what was described to have been a case of colic. On arriving I found the colicky symptoms had passed off. The horse had an abnormally clear eye, cold extremities, but fair pulse; was pushing his hind end into a corner of the loose box and refused to move. When forced to move he staggered like a drunken man, grasping for the floor with his feet.

On 8th inst., temp. 104½°, pulse good, full and little over normal, pushing into corner of box and staggering as on previous day; feeding and drinking fairly, but swallowing with difficulty, part of the liquid coming back by nostril. Treatment: Mustard to spine and throat with nux. vomica pulv. 30 grs., and ext. belladonna 15 grains in ball twice daily.

9th.—About same, feeding better, copious purulent discharge from nostrils, coughs a little when being balled.

10th.—Pulse and temperature normal, moves round box freely though "shakey."

11th.—Looks alright with the exeption of discharge from nostril, and using hind legs somewhat awkwardly.

Remarks.—This disease looked like a combination of ordinary cold and stomach staggers; but as stomach staggers is out of the question, my opinio n was that probably influenza in some way affected the brain.

Tetanus.

Bay cart mare showed symptoms of tetanus on the 11th inst., died on following day.

Particulars.—Called in to see above animal on 12th. Owner thought she had a sore throat and applied liniment to lungs and throat just before I arrived. Liniment put her into a very excited state and jaws were completely locked. A little water was offered, but all attempts to swallow were futile. Chloral was given per rectum, and tetanus serum telegraphed for to Messrs. Willows, Francis, and Butler's. Excite-

ment continued until evening, when death ended the scene.

History.—No wounds; animal showing very marked symptoms of œstrum, which was continued after the disease set in, constantly voiding small quantities of urine.

Remarks.—Has œstrum ever been noticed in association with tetanus?

EXTRACTS FROM FOREIGN JOURNALS.

Removal of a Hernia by a Suitably Applied Truss.

By Veterinary Surgeon Kaiser, of Osterburg.

On October 3rd, 1897, I was called to see a valuable horse on which a great swelling had appeared in the off flank during the night. On my arrival found a Hanoverian gelding 2½ years old with a swelling beginning about half way up the belly, extending backwards right under the abdomen and downwards to the linea alba, and forwards in the direction of the elbow joint. The swelling was sharply defined, about a hand-breadth high, hot to the touch, and caused the horse great pain on the slightest pressure. The pain diminished from the centre of the swelling to the periphery. No injury to the skin was noticeable. I was of opinion the condition had existed sometime, in spite of the contradiction of a none too trustworthy attendant. As the swelling was comparatively speaking hard and could not be palpated to its depth, could only surmise the existence of a hernia.

For treatment I sewed two thin corn sacks together filled them with a fair amount of hayseed and chop, and sewed this broad bandage tightly together round the body of the horse. Day and night the sack was moistened with cold water. At first the horse ate badly, but after two days the appetite improved. The bandage was taken off and warm poultices substituted. The swelling gradually lessened and a fresh palpation discovered the hernial ring. This took the shape of a large triangular rent, through the greatest diameter of which a child's head could pass. So extensive was the rupture that its posterior angle sloped parallel to the muscular fibres of the oblique abdominal muscle half hidden by the stifle joint till it reached the pubis. The anterior angle extended a hand-breadth in front of the stifle joint. During the whole time the horse was fed on a few oats and pulped turnips mixed with bran, and oatmeal in the drinking water. This diet was given during the whole period of illness in order, if possible, to lessen the circumference of the animal's body. Clysters of luke warm water were also given.

After 12 days I resolved to put on a special truss. I ordered a skilful saddler to make me a kidney-shaped plate out of strong shoe leather. The plate was lined with fine felt stuffed with padding, gradually rising to the thickness of one's thumb and approximating to the shape of the hernial ring. This plate was now so fixed that the notch received the stifle joint and the padding accurately closed the hernial opening. From the convex edges of the pad several straps ran to a well padded surcingle, and one strap from the upper edge right round the loins and belly of the horse to the pad again underneath, another over the back of the horse to the near side of the surcingle, a third between the animal's thighs brought round the near side of the tail over the root of it and back to the pad again. On the near side of this crupper-like strap was a support so that it could be fixed by another strap to the near side of the surcingle. These straps were all drawn tight by means of buckles, and so adjusted the plate that permanent, equable, and uniform pressure could be exercised on the hernia. In order that there should be no movement of the apparatus I finally fixed a breast strap to the surcingle. In order to control the apparatus it was only necessary to tighten this or that strap as the animal's girth lessened on the concentrated diet. How carefully the pad was made and adjusted may be judged from the fact that not a single sore arose from chafing or pressure. Every individual strap was lined with fine felt.

On November 15th I took the truss off and could only detect a swelled cord-like seam at the place of rupture, caused by the approximation of the edges of the hernial ring. The hernia had completely disappeared. After further 14 days I saw the patient again. The seam had gradually smoothed out, and will in future become almost or quite unnoticeable.—*Berliner Thier. Woch.*

G. M.

VETERINARY SOCIETIES.

CENTRAL VETERINARY ASSOCIATION OF IRELAND.

The usual quarterly meeting was held in the Hammam Hotel, on Tuesday night the 15th inst. Those present were: Messrs. D. Fulton, Mullingar; Freeman, Dublin; Cleary, Mullingar; Watson, Boyle; Byrne, Roscommon; Dawson, Cavan; Richardson, Dublin; Winters, Limerick; Howard, Ennis; Beckett, Dublin; Wade, Celbridge; Watson (Secretary and Treasurer), Dublin. Mr. D. Fulton, president, occupied the chair.

The Secretary having read the minutes of the last meeting, held in Ballinasloe October last, they were duly signed.

The election of President, Vice-president, and the Executive Committee were proceeded with.

On the proposal of Mr. Watson (Dublin), seconded by Mr. Winter, Mr. D. Fulton was re-elected president. As vice-president Mr. Watson (Boyle) was proposed by Mr. Wade His proposal being seconded by Mr. Freeman, was carried unanimously.

Mr. Byrne proposed, and Mr. Cleary seconded, that Mr. Watson (Dublin) be elected to act in the dual capacity as hon. sec. and treasurer, which was adopted.

After a lively discussion in which Messrs. Watson (Boyle), Freeman, Winter, Howard, Cleary, Watson (Dublin), and Wade took part, as to the formation of the Executive Committee, the following were elected: Messrs. Byrne, Freeman, Dawson, Winter, Nolan (Parsonstown), Howard (Ennis).

Messrs. Healy (Middleton) and Dun (Dublin) were proposed by Mr. Watson (Dublin), and seconded by Mr. Wade. The proposal was carried unanimously.

The Secretary having laid the balance sheet before the Association, it was adopted unanimously.

RABIES.

By JOHN FREEMAN, F.R.C.V.S., Dublin.

Mr. President and Gentlemen,—When attending the inaugural meeting of the Central Veterinary Medical Association held last October in Ballinasloe, I was asked, and I promised, to read a paper at this, our first meeting in Dublin, and the subject I have chosen is that of rabies, chiefly because it is a disease much, I regret to say, in strong evidence at the present time, and the methods adopted for its eradication much criticised. The limited time at my disposal has prevented me giving you a long paper, but I have tried to make it practical, and I trust useful, and hope that the assembled members will consider it worthy of discussion.

Rabies may be defined as a specific virulent disease, mostly seen in the canine species, and characterised by an alteration in the normal habits of the dog This definition may sound odd, yet it is expressive when the symptoms are noticed.

As regards the history of rabies, its antiquity is undoubted, and scarcely any country is free from its ravages excepting (according to Fleming) Australia, New Zealand, Van Diemen's Land, The Azores, and St. Helena, as well as the Island of Madeira ; nor has it been seen in Africa. According to present statistics rabies exists to a much greater extent in England and Ireland than the general public are aware of, and according to the Board of Agriculture returns in England the number of cases of rabies for the past 4 years were for the 51 weeks :

In	1894:	Dogs	233.	Other	Animals	10
„	1895	„	666.	„	„	55
„	1896	„	436.	„	„	22
„	1897	„	155.	„	„	16
Four years total			1,490.			103.

In Ireland, according to the returns of the Veterinary Department, for the 51 weeks :

In	1894:	Dogs	518.	Other	Animals	246
„	1895	„	553.	„	„	201
„	1896	„	482.	„	„	196
„	1897	„	391.	„	„	105
Four years total			1944.			748.

From the above figures it will be observed the very great number of cases of rabies in Ireland compared with that of England, and the marked decrease for 1897 shows plainly the advantage of preventative measures.

The symptoms of rabies are marked by striking peculiarities. In the dog the earliest symptom observable is that of dullness, and to a close observer the eye presents a peculiar appearance—that of unrest, in fact the dog is not easy in any one position or place, always on the move, here, there and everywhere, hiding in corners, resting for a moment then up again, and should it meet with any obstruction, imaginary or otherwise, it will snap. Sometimes, as if it had a lucid turn, it appears friendly, and displays more than ordinary affection, such as licking the hands ; this affection may quickly disappear and the dog display anger, but yet be under the control of the owner or attendant's voice. As the disease advances the appetite becomes depraved, and if in the house it will eat carpets, curtains, mats, coal ashes and such like, lick the fenders ; it may suddenly cease this and snap at imaginary objects, getting wildly excited. Then you notice a thick viscid saliva coming from the mouth, this saliva appears in greater abundance after a sharp attack of delirium, and should the dog be no way housed up it may rush out and wander for miles, and in such wanderings it has been clearly noticed a rabid dog will not go out of its way to attack, but upon anything obstructing its career it will snap and bite. A rabid dog has not dread of water at any period of the disease, nor does water produce horror, fear, or aversion. A rabid dog appears always to be thirsty, and in the earlier stages can lap water freely, but as the disease advances the throat gets paralysed and deglutition becomes impossible. In the earlier stages the appetite is fanciful, sometimes it eats fairly well, other times fastidious, and again it may be voracious, eating indiscriminately all sorts of foreign bodies, even its own fæces and various parts of its own body. The condition of the mouth of a rabid dog after a long march is very characteristic ; the saliva is sticky and adhering to the jaws, and generally befouled with foreign matter. Should the dog be confined in a kennel during the illness the bark once heard is rarely forgotten, or the symptoms evoked by teasing with a stick or broom. The changed bark of a rabid dog is supposed to be caused by alterations taking place in the larynx which causes the voice to be hoarse and cracked, not at all unlike a child with croup. The preliminary bark is of a somewhat high pitch, with extended mouth, and this is continued with many howls of much less intensity which seems to come from deep down in the throat ; nor does the mouth close after each howl or bark, as in the healthy dog. Sensibility in rabid animals appears almost lost, or at least the dog and other animals appear to mutilate themselves without any outward appearance of pain, consequently it is a sign to be aware of when a dog mutilates itself. The attack of a rabid dog is always silent, and if attacked and badly wounded in return it never winces or evinces pain. The duration of an attack of rabies is usually from three to five days, the more excessive the delirium the sooner death ensues, the cause being exhaustion and paralysis. In the dumb form of rabies we get paralysis of the lower jaw, the larynx also being involved. In this condition the dog remains with its jaws pendent, mouth opened, tongue flaccid, swollen, and generally tinged brown, with stringy glue-like saliva, if the throat be examined it is usually inflamed ; in this condition the dog can neither eat, drink, nor bark, nor is the excitement noticed as in the furious form. It is calculated that fully 20 per cent. of rabid dogs are attacked with this form, and it is quite a common thing for a veterinary surgeon to be called in to see a dog suffering from this form of rabies, the owner being under the impression a foreign body existed in its throat.

The symptoms of rabies in a cat, though rarely seen, are very similar to those of the dog, only if possible intensified, and its tiger-like character renders it very dangerous of approach, owing to the face being the chief part of the body for attack.

In the horse and ass the most intense excitement exists, gnawing at the wood, rails, manger, and even trying to tear up the flooring with its teeth, and mutilating various parts of the body. Salivation in the horse and ass I have not noticed more than when seen crib-biting or chopping at the manger when being dressed.

In cattle the symptoms are not at all unlike stomach staggers, dashing headlong at all sorts of obstructions as if blind, and tearing up the ground with their horns ; this is followed by paralysis of the muscles of locomotion.

In sheep the most noticed symptom is butting, and should you present a stick at them they will take it in their mouth and nibble it, just like a stallion. In the goat the same symptoms are most noticed.

In the pig you get the frothing at the mouth with intense excitement and violent attacks upon everything in its way, but paralysis very soon supervenes, rendering it harmless.

In poultry the symptoms would remind one of a country jig; jumping in all directions, pecking at the other fowl, and performing all sorts of antics. Exhaustion, convulsions, and paralysis very soon terminate existence.

In most cases of rabies death takes place from two to seven days, but it greatly depends on the degree of excitability.

Undoubtedly many dogs are slaughtered as suffering from rabies which are not rabid. Perhaps the most common disease mistaken for rabies is epilepsy (whereas in rabies we get no epileptic seizures), sore throat, angina, gastritis, colic, distemper, tetanus, and the presence of worms—the pentastomes, and the echinococcus. To distinguish rabies from other diseases its peculiarities should always be remembered. Nervousness, altered habits, anxiety, restlessness, irritability and hallucination, peculiar bark, depraved appetite, biting, difficulty of swallowing, and paralysis. With these in your mind's eye, diagnosis of rabies from other diseases I do not consider difficult.

The period of incubation from my own experience after direct inoculation may be put down at from 14 to 28 days, but in many cases it is indefinite, and some authors say it may be 12 months

As regards the post-mortem, this is a very vexed question; are there any real, reliable lesions? My opinion from the very many cases that have come under my notice is, there are not. Undoubtedly I regard the presence of foreign bodies of all sorts and descriptions in the stomach as most suspicious, also the presence of pasty saliva adhering to the lips, abraded tongue, broken teeth, inflamed fauces. With these present, and a history of the case, although not seen during life, I would be satisfied in giving my opinion that rabies did exist. Yet in many cases I have observed all the symptoms of rabies during life, and on post-mortem examination found an absolutely empty stomach, no inflammation, no injury to tongue, teeth, pharynx, in fact negative appearances, but the inoculation test proved rabies did exist. The post-mortem, I am of opinion, cannot be relied on; yet in cases where persons have been bitten we are expected to form an immediate opinion, and I think when any of the so-called post-mortem lesions are observed, we are justified in stating rabies did exist, and then prove it beyond doubt by inoculation; but in the meantime let the patient undergo the Pasteur treatment. Again, should the inoculation test prove unsatisfactory, and the Pasteur patient develop hydrophobia, another serious question arises and *vice versa*. As regards the inoculation test, I consider it absolutely necessary to inoculate from four to six rabbits, remembering always that some men and animals prove refractory to virus, but where more than one animal is inoculated and the symptoms are developed, you are on far safer ground.

With regard to the suppression of rabies, until quite recently little, if anything, was done owing to the inaction of the various local authorities in adopting measures of suppression. However, with the Rabies (Ireland) Order and the Muzzling of Dogs (Ireland) Order, 1897, the law at present directs compulsory muzzling of all dogs, notification of the disease by the owner, inspection, slaughter of the diseased, also of those bitten by rabid dogs, and isolation of the suspected. All these things are now required to be carried out by the above orders, whereas before, should rabies exist in the district of one local authority, and they adopted the muzzling, the local authority of the adjoining district invariably did not, with the result that the methods of dealing with the suppression of rabies became the laughing-stock of all sensible people.

As regards muzzling, if carried out properly it is the best means of ridding the country of rabies. I admit it causes the owners of dogs at first very great inconvenience, but was any reform of any kind carried out satisfactorily without inconvenience? Certainly the muzzling of dogs order has called forth vengeance and all sorts of abuse on the farmers, and what does it all amount to? Simply the exercise of a little patience, and the supplying of a dog with a well fitting muzzle. Of course people will say dogs were never intended to wear muzzles, but necessity knows no law, and I contend that dogs, after a few days, do not mind wearing a good fitting muzzle. Of course I know this will bring forth a good discussion, and that is what I want. But are we to keep on continually muzzling? If after, say twelve months, rigid muzzling we find no case of rabies, then what is the best way to prevent a recurrence of the disease? Well, first of all keep the Foreign Dogs' Importation Order active. Anyone requiring to bring in a dog. let him supply the authorities with his name and address, and particulars of where the dog is to be located; then let the authorities grant a licence specifying certain conditions, such as muzzling for three months, notifying change of address, &c. With such restrictions detection would be ensured, and spread of rabies prevented. But once the muzzling order is removed, dogs will become as numerous as ever, *i.e.*, the uncared for dogs and ownerless curs, which are really, as far as Ireland is concerned, the starting point for the spread of rabies. What we really want is that every dog should have a registered badge and number attached to his collar (same as sample which I submitted and suggested some years ago to the local authority of the Rathdown Union) as a substitute for muzzling, showing a licence had been taken out, and that badge should further bear the name and address of the owner, and any dog found at large without such collar, with badge, label, or pendent attached, should be dealt with as dogs are when the muzzling order is in full force if found without a muzzle. The question arises, how is the registration and licensing to be enforced, as I am of opinion the present method of doing so is quite inadequate, and from my little experience I think I am within the mark in saying that 20 per cent. of the dogs in the country are not licensed. Could not the registration and licensing be entrusted to some other body than the excise? say the police or the local authority, and apply the proceeds to the reduction of the rates. By doing so all the residents in a district would have an interest in seeing that his neighbours who own dogs duly take out a license. Again, have the registration lists posted up in various places, similar to the voters list; by so doing people could see at a glance whose dogs are registered and whose are not. This would have the further advantage that those who care for their dogs would co-operate in every way in carrying it out, instead of, as in the muzzling order, doing all in their power to evade it, when they see a chance of doing so with impunity, for it seems to them, rightly or wrongly, a hardship and an injustice that those who take out their licenses duly and look after their dogs properly should be put to trouble and inconvience because of those who do neither the one or the other. This plan would, of course, require an alteration in the law of licensing as it present exists; but I do not think so simple and feasible a measure would be very difficult to get through Parliament, and if once adopted and carried out properly, I consider it a practical and easy way of dealing with rabies. (Loud and prolonged applause).

Discussion.

Mr. Wade, after congratulating Mr. Freeman on his valuable paper, proceeded to discuss the question of rabies; he adverted on the absence of the disease in Australia, and dwelt on the marked tendency displayed by collie dogs to the contraction of rabies. He stated his reasons as to their greater liabilty, and then went on to consider the question of the spontaneous origin of the malady and the possibility of stamping it out.

Mr. WATSON (Boyle) reviewed the symptoms of rabies as they manifest themselves in animals other than the dog. He pointed out the difficulties in the way of sending brains of diseased animals to the Veterinary Department, to have the opinion of specialists thereon. He discussed the symptoms, incubation period, and post-mortem appearances of rabies.

Mr. WINTER thought that an increase of the dog tax and a more rigid enforcement of the muzzling regulation would, within certain limits, act as an effective preventative of rabies.

Mr. HOWARD spoke on the possibilities of the eradication of the disease, and on its post-mortem lesions.

Mr. BYRNE congratulated Mr. Freeman on his very valuable paper on rabies. He (Mr. Byrne) expressed his opinion that the symptoms of rabies and stomach-staggers bore a great similarity, which often led, he thought, to wrong diagnosing. As far as the lecturer went, on the best means for its eradication, he heartily supported him. Reviewing the theories as to the problem whether there are any definite lesions in the animal structure, due to rabies, he expressed doubt. In referring to the spontaneous origin of rabies, its origin must be given before it is finally refuted. Dwelling on the subject of specialism, he threw out the suggestion that the Government ought to found lectureships for the advancement of knowledge in veterinary science. (Applause.)

Mr. CLEARY gave it as his opinion that the average incubative period of rabies was from 14 to 28 days, though it might extend to six weeks or longer: he also dwelt on the subject of muzzling.

Mr. WATSON (Dublin) discussed the mode of death in rabies. Exhaustion and paralysis usually proved to be the proximate causes, due to the presence of toxins in the blood. From experiments on animals he believed it was determined that the average period of incubation was 19 to 21 days. In his opinion castration was a valuable prophylactic measure inasmuch as it considerably diminished the virility of animals. He expressed doubts as to the existence of any irrefutable post-mortem appearances in the brain, the cord, or other structures characteristic of the disease under discussion. (Applause)

The lecturer having suitably replied to the different speakers remarked in conclusion that Professor O'Sullivan, F.T.C.D., was the specialist on the pathology of rabies.

The SECRETARY announced that the next meeting would be held in April next, at Limerick, when Mr. Winter (Limerick) will read a paper.

The proceedings then terminated.

LANCASHIRE VETERINARY MEDICAL ASSOCIATION.

The thirty-sixth annual meeting and dinner was held at the Grand Hotel, Manchester, on Friday, February 4th, the President, J. McKinna, Esq., F.R.C.V.S., Huddersfield, occupied the chair, and about 60 members and guests were present, including Professor Williams, Edinburgh; Dr. Niven, M.O.H., Manchester; Dr. Annis, M.O.H., Huddersfield; Mr. Greenhalgh and Mr. McCarmick, hon. sec. of the Yorkshire V.M.A.; and Mr. W. Shipley, Junr., hon. sec. of the Eastern Counties V.M.A.

Apologies were received from Professors McCall, McFadyean, and Dewar, Drs. Delépine and Young, and Messrs. Hunting, Carless, Dawes, and Colonel Duck, A.V.D.

The minutes of last meeting were read by the Secretary and approved on the motion of Mr. J. H. Carter, seconded by Mr. A. Munro.

ELECTIONS AND NOMINATIONS.

Mr. BEN. FERRIE, M.R.C.V.S., Stockport, was elected a member, the resolution being proposed by Mr. J. H. Carter, and seconded by Mr. W. Packman.

Mr. E. A. SAXTON, M.R.C.V.S., Nantwich, was also elected a member on the proposition of Mr. Challinor, seconded by Mr. J. Lawson.

The following were nominated for membership: Mr. J. B. Collyer, M.R.C.V.S., Knutsford, nominated by the Secretary Mr. H. Locke; Will Stothert, M.R.C.V.S., Blackburn, nominated by the President; Mr. Hugh H. Ferguson, M.R.C.V.S., Warrington, nominated by Mr. J. H. Carter.

PRESIDENTIAL ADDRESS.

By J. McKINNA, F.R.C.V.S., Huddersfield.

Gentlemen,—My first duty on taking this chair is to thank you most heartily for the great honour you have done me in electing me your president. I accept the position with considerable diffidence as to my capacity for such a high office, but with none as to my intentions and earnestness in carrying out its duties. I cannot help knowing that I follow in the steps of men of greater capacity and of greater attainments, still it will ever be my sincere desire to further the best interests of this Association during my year of office, and so keep it up to the high standard of efficiency which it has now attained. I look to you for help, and at the same time wish gratefully to acknowledge the many kindnesses you have shown to me while I have been a member of this Association. I shall not inflict a long address upon you this evening, and should have been glad to have been excused altogether. But as the Committee would not hear of this, I will briefly lay before you a few thoughts that have occurred to me on matters relating to the profession.

In reviewing the past year there has not been very much to note. I consider in one respect, however, we have made a distinct advance, and that is in the passing into law of the new Public Health (Scotland) Act, and only hope the same law will soon apply to the whole of Britain. After a great struggle the veterinary surgeon is at last recognised publicly in his proper sphere, for who is so capable as he to diagnose the diseases of animals, as well as to give an authoritative opinion as to their surroundings etc. In an editorial on this subject Professor McFadyean sums up the matter thus: "Section 34 empowers the Local Authority of any district, other than a Burgh, to erect slaughter houses within or without their district, or to combine for that purpose with neighbouring Local Authorities. Although the section is only permissive, one may hope that it will help towards the gradual extinction of the dirty, practically uncontrolled private slaughter houses that are still the rule in most parts of Scotland. When public abattoirs take the place of those it may be regarded as certain that they will be supervised by veterinary inspectors.

Section 43 deals with the question of unsound food. It empowers any medical officer, sanitary inspector, or veterinary surgeon approved of for the purpose by the Local Authority to inspect any article of food, or any animal intended for food which is exposed for sale; but it stipulates that in the case of any proceeding under the section with regard to a living animal the medical officer, or sanitary inspector unless he is himself a qualified veterinary surgeon, shall be accompanied by an approved veterinary surgeon. The most improved clause of this section, however, is that which empowers each Local Authority to appoint a place within its district for the examination of any animal alive or dead, and to appoint a veterinary surgeon whose duty it shall be for a fixed fee to examine such animals and to pass or condemn the same as regards their fitness for human food.

The importance of this lies (1) in the fact that the veterinary surgeon is exclusively recognised as the meat inspector, and (2) in the fact that a preceding part of the section exempts from penalty or imprisonment any person accused of offering for sale unsound meat, provided he can prove that the meat in question had within a reasonable time prior to the seizure thereof, been examined and passed by a veterinary surgeon approved for the purpose.

Section 60 deals with the inspection of dairies and it stipulates that the medical officer of health must be accompanied by a veterinary surgeon approved for the purpose when he examines animals whose milk is supposed to be causing disease among human beings, and any report by the medical officer of health regarding such an inspection must be accompanied by the report of the veterinary surgeon. It is evident, therefore, that the powers committed to the profession are of a very responsible character, and if in the future the medical officer of health and Veterinary surgeon can work amicably together what a great boon will be conferred on the public at large, especially in our populous towns and cities.

In a recent public prosecution meat case known to me a recognised medical authority on tuberculosis, which was the question in dispute as to its fitness or otherwise for human food, declared that an animal could not possibly live whose viscera were full of tuberculous nodules, including the kidneys, which were studded with miliary tubercles, together with two large abscesses besides smaller ones in each lung, as well as the lymphatic glands being affected. Whatever may be the case in the human subject, we know that in veterinary practice such cases are frequently met with and still the animal be in fair condition and live for some time. This authority also stated that such a condition was a purely local affection, and if the lesions were stripped it would be perfectly fit for human consumption. He likewise stated that no case, however pronounced, should be condemned without the aid of the microscope, and yet admitted in cross-examination that the microscope in such cases was not necessary as the disease could easily be seen in cutting up the meat. If such carcases of marked generalized tuberculosis are palmed off as wholesome food we had all need pray to be delivered from such medical meat inspection. This makes me more convinced than ever that in all cases of meat inspection the veterinary surgeon is the one whose training alone fits him for being exclusively recognised as the authority to determine the existence or otherwise of disease in either the living animal or post-mortem.

Another matter which is worthy of notice is the great benefits to be derived from the National Veterinary Benevolent and Mutual Defence Society. This society ought, in my opinion, to commend itself to the whole of the profession more than it does, especially the younger members of it who may not be established long in practice and who any day may be brought into court by some litigious client. To such members it must be of inestimable value, and the wonder is that more have not taken advantage of it. I consider it a libel on the part of those who have thought to designate it purely a "Manchester Society." This is not so, and speaking as a Yorkshire representative I have never looked upon it in that light, although I confess we owe much to those friends in Manchester who have done their best to make its advantages known to the profession. Mr. Morgan, of Liverpool, now president of the Society, and the late lamented Mr. Thos. Greaves, I believe have travelled the length and breadth of the country, spending much of their time and money, persuading members to join the National Society. To these and other gentlemen the profession must always owe a deep debt of gratitude for the sacrifice they have shown in advocating the claims of the Society. I should like again to emphasise that this therefore is not a local society as some would have us believe, but national in every sense of the word, and truly desirous of enlisting if possible every member of the profession. May I ask those of you who are not members to show your practical sympathy by joining without delay, for although you may not have to defend a case at law (and I hope you may not) still you are subscribing for something which has for its object the relief of less fortunate members who may not be so from any fault of their own, and this fact ought itself to call for a large number of subscribers. It must be a matter for regret to us all who desire to see the National Society strengthened that an attempt is being made by our southern friends to form what cannot but be a local society. Especially when it is remembered that very recently the Society has spent a large sum of money in defending a case in the south. In looking back on the last quarter of a century one is glad to note the great strides the profession has made, especially in the education of the student, who now has to go through a course of training as thorough as that of the medical. Both educationally and socially I think I may safely say our position is now assured.

In this democratic age titles have not the value they once possessed, but we were glad nevertheless to see amongst those upon whom the Queen conferred new year honours, the name of Professor, now Sir George Brown, and even the commemoration medal of the Jubilee presented to the President of the Royal College of Veterinary Surgeons should not be passed without comment, although I have noticed in some quarters that it has been held up to ridicule. These honours have been bestowed on purely professional grounds, and one gladly welcomes any signs which show that as a professsion we are advancing. We number men of culture, of high scientific and literary attainments as the heads of the veterinary profession, some of whom we are glad to welcome here to-night. It behoves us, therefore, as individual members of the same to do our utmost to uphold and advance its interests not only by our conduct as professional men in dealing with our clients, but as honourable English gentlemen in dealing with each other. For I regret to say that in these days of keen competition and overcrowding, the struggle for a living leads occasionally to conduct which, to put it mildly, borders on the unprofessional.

The question of eradicating swine fever from the country is a work of great magnitude, but the Board of Agriculture I think is to be congratulated on seeing the work shall I say nearly successfully accomplished? Certainly the number of outbreaks during the last few months are comparatively few and far between, and I am hopeful of seeing the country soon free from this dire disease which has been the cause of great loss to agriculturists. This success has been accomplished, I maintain, since more responsibility was thrown upon the veterinary surgeon.

It is a matter for regret that tuberculosis is not yet scheduled in the Contagious Diseases (Animals) Act. Certainly it is by far the most widespread and the most serious of all diseases among farm stock, and is greatly on the increase among milch cows. Individual effort can do much to prevent its spread, and if veterinary surgeons will bring their influence to bear upon stockowners to induce them to have their stock periodically tested with tuberculin (which is undoubtedly of great and reliable diagnostic value) together with isolation of affected animals would be an important step in the right direction.

It is really surprising in apparently fine herds of cattle how many when tested show themselves the victims of this insidious disease. To mention only one case known to me, out of 94 cows tested on a large dairy farm, no less than 70 showed a marked reaction. Let us hope that the next reform undertaken by the Board will deal in a practical manner with this disease. To quote from a pamphlet written by a friend of mine, Mr. Robert Barron, M.R.C.V.S., Blandford, "Legislation is urgently

required to make the diagnosis of tuberculosis compulsory at the expense of the Government, to enforce the isolation of diseased animals and disinfection of buildings, to secure sterilization of the milk of tuberculous cows, and adequate veterinary inspection of their flesh for human food. Very much may be done to root out tuberculosis without resorting to the "stamping out" process which, in so fearfully prevalent a disease as this, would be little short of ruinous.

I thank you, gentlemen, for your courteous hearing, and in conclusion may I express the hope that you will by your attendance and contributions make the meetings of the year upon which we have just entered as interesting as those of past years. For my own part I think these periodical interchanges of thought (to say nothing of the social side) are of great benefit. By comparing notes our ideas are enlarged and our sympathies broadened. We find we are none of us too old to learn, nor free from the trials and worries incident to any trade or profession. But to every man who gives to his work the best of his time and ability there will surely come that recognition and appreciation which is his due. 'Tis not in mortals to command success, but we'll do more, gentlemen, we'll deserve it." And now, gentlemen, nothing remains but to "let good digestion wait on appetite, and health on both."

On the motion of Mr. W. A. Taylor, seconded by Mr. Abson. and supported by Mr. E. Faulkner, a vote of thanks was accorded the President for his very interesting and eloquent address.

Prof. Williams drew attention to an incident which happened in Edinburgh early last month. A carcase of beef, which had been passed by a veterinary surgeon he knew well and who was beyond suspicion, was, at the public abattoir condemned by Mr. Littlejohn, the medical officer, whose observations upon the veterinary surgeon were of a most stringent, if not almost defamatory character. To, if possible, support the veterinary surgeon he inspected the carcase, and concluded that it was justly condemned, as it was in a dreadful condition, but here arose the question, which placed a veterinary surgeon in a peculiar position to be guarded against and avoided, as to whether these "slink" butchers substitute other carcases which are sent to the public slaughter house without being subjected to inspection, the good ones being sent to their own shops.

The balance sheet of the Society was received and unanimously adopted on the motion of Mr. E. Faulkner, seconded by Mr. Jones.

The Dinner.

After the customary loyal toasts had been duly honoured, Dr. Annis, M.O.H., Huddersfield, proposed "The Royal College of Veterinary Surgeons." He regretfully referred to the absence through illness of Dr. Delépine, whose proposal of the toast, he thought, would, no doubt, have been more entertaining and instructive than his. Referring to the health of the country, he considered the medical profession, and the medical officers of health in particular, were very much indebted to the veterinary profession for their assistance in endeavouring to reduce the causes of death among the people inhabiting large towns. The veterinary profession should work hand in hand with the medical profession, because many of those diseases from which animals were liable to suffer were communicable in various ways to man. In connection with the meat and milk supplies, there was a great work in store for veterinary surgeons and, as a matter of fact, he had on one or two occasions tentatively suggested to his committee the wisdom of appointing a veterinary surgeon, if not to give the whole of his services to the corporation in looking after the meat and milk supplies, yet by a species of retaining fee he (Dr. Annis) should be at liberty as any time to call upon him for his assistance and observations upon any question in dispute. A code of regulations, which he had recently drawn up, whereby the milch cows in his vicinity would be able to live more comfortably and consequently with greater benefit to the milk supply, had, he was pleased to say, met with the favour of their Council and had been adopted. In this matter he was indebted to his friend, Mr. McKinna, their able president. He was also able to call upon him for various help in connection with the meat supply. This question of the milk supply was of so much importance that he would like established, not only in Huddersfield but over the whole country, some system by which the cows, upon whose lacteal fluids we depended, were kept in a proper healthy condition. Every cow should be tested with tuberculin, and if found to react unfavourably an arrangement would be welcomed whereby a portion of the loss would fall upon the community at large, and a reasonoble proportion on the cowkeeper. It was only by such measures as these that the cowkeeper would become interested in seeing that his cattle were kept to a natural standard of health. This matter Dr. Annis had also mentioned to his committee, but economical reasons prevailed.

Mr. A. W. Mason thanked them for coupling his name with what was, he thought, the toast of the evening. It certainly had been placed in most able hands. He was not, however, as was supposed, the senior member of Council. That was Professor Williams, but as a junior member he tendered his sincere thanks to Dr. Annis for his kind sentiments respecting the veterinary profession.

Mr. Alec. Lawson, after a brief reference to Mr. Mason's long connection with the Council of the R.C.V.S. and to the probability of his being before long its president, spoke of the Council work as being hard, but it had been a great pleasure to him to be associated with it and to have assisted in that laborious work. Health permitting he would continue it in the future.

Professor Williams said he felt highly complimented at being asked, as senior member of Council, to say something, but this was not his intention, because he was a fighter in the Council—and, unfortunately, a fighter in the minority.

Mr. W. A. Taylor gave "The Veterinary Schools," remarking it was an important one inasmuch as it affected a subject connected with the education of the aspiring veterinary surgeon. In his career as a member of the profession, he had seen vast strides in the educational department of veterinary science. The profession had striven hard to gain their present proud position, and without the interest or the assistance of the Government. All the veterinary schools, he thought, with one exception, were self-supporting institutions, and after the resolution of the Royal College of Veterinary Surgeons that the period of study at the Colleges should be increased to four years he was somewhat astonished to find the four teaching schools still in existence, as it meant no small call upon the individual exchequers of the various institutions to maintain the educational status of their respective teachers for after all what was learnt at College adhered to him through life. Moreover the number of examinations had been increased, therefore, it could be understood that the work of the teachers of the schools had also been augmented. Speaking from experience it was no light duty to be an examiner, and from this the deduction was apparent that it was manifestly much more difficult to be a teacher. It required energy, skill, determination, and above all patience to educate the youngster so that he may pass successfully. He knew that the trials of the principals and proprietors of, at any rate, three out of four of the veterinary schools had been great since the period of curriculum had been increased to four years, but he hoped these trials would be less in the future. Veterinary teachers had quite enough to do in the fulfilment of their duties, but it would appear that in the veterinary pro-

fession there were members, who did not hesitate to traduce the characters of some of the teachers, to wit an article in *The Live Stock Journal*, dated January 21st, which he was sorry to say was written by a member of the profession, stating that the majority of the lecturers on cattle pathology were deficient, or rather had no practical acquaintance with the bovine species. It was disgraceful, nay scurrilous—that a man should write this in a lay paper. He dare not write in the same terms in one of their scientific journals, in fact conduct of this description ought to be considered by the Council of R.C.V.S. Proceeding, Mr. Taylor referred to the presence of the "evergreen" Professor Williams, and congratulated him on his rejuvenescence. Whether, or not, their teachers were acquainted, practically as well as scientifically, with the diseases of the bovine species, it was well-known that a certain disease broke out in Jamaica and Professor Williams was asked to investigate that outbreak, and as a result of his investigation and advice it has disappeared. This was a triumph for the veterinary profession. Concluding, Mr. Taylor referred to the close connection between the veterinary and medical professions, and said that if they could not advance hand-in hand along the broad path of science to the advantage of the public it would be a sorry day for both professions. There was no time now-a-days for them to quarrel. Their goal was the amelioration and prevention of disease in the human subject and in the lower animals, so that at some day they might be in a position to state that diseases which were communicable from one to the other had disappeared from the face of the earth. He asked them to drink to the health of the veterinary schools, coupling with it the name of the one professor present, who never deserted them, the "evergreen Prof. Williams."

Professor WILLIAMS, in responding, said on looking upon such a splendid assembly he felt exceedingly flattered to see so many of his old students and disciples, who always extended to him a hearty welcome, but on recalling the circumstances of his being at the Association's second annual dinner about thirty-five years ago, and missing at this festive board the faces of those who had passed away and who were the founders of the Association, he could not help confessing to a feeling of regret. In the room there was only one who was present at that second annual dinner, and he was then a "wee laddie" not having gone to College. That was Mr. Augustus Taylor, who now proposed his health. Continuing, Professor Williams said that there were men, giants of the profession, in those days who worked hard and laid the foundation stone of the Association, which was continually growing. Amongst them were such men as John Lawson, Peter Taylor, Greaves, Friend, and Lucas. Still remaining was old George Morgan, and he was sorry he was not present, for he might have assisted him with some little facts in connection with the foundation of the Association, and the National Benevolent and Defence Association. He (Professor Williams) was the only representative of the founders of the Defence Society. He felt sorry that so many good men had passed away, still he saw their sons. Mr. Woods was also a very old and respected founder. He was glad to see his son, and also the sons of Jno. Lawson. All honour, respect, and devotional feeling should be extended to the memory of those men, who did much in their time for the elevation of their profession, and who were pioneers in the same. He could scarcely express his feelings, because in all probability in course of time the opportunities of meeting them and his kind friends, would not and could not possibly be very frequent again, but he trusted that he should still have a few more opportunities of meeting them. He had the greatest pleasure in meeting the Association, and the Yorkshire Association of which he was one of the founders. He was always rewarded when he came to Lancashire and Yorkshire, and he extended a lifelong gratitude to his friends in those counties for their kind support in keeping up his school. There was a great deal to contend with, a great many sacrifices, but owing to the kindness of his friends in the Midland Counties his school had still been able to keep its head above water. Mr. Taylor had kindly referred to his work in Jamaica, and he returned his best thanks to him. That work was very hard, was honestly performed, and had terminated in success. When he went there the whole island was full of disease, thousands of cattle were in a dying condition, thousands had died within the three or four years previous to his visit, and the inhabitants did not know what was wrong; some said this, that, and the other. However, he went into the matter conscientiously to get at the root of it. He did nothing more than give his opinion as to the cause, and suggested remedies for the eradication of the disease. If he had done no more work in his lifetime he felt certain that the success which had attended his investigations was a sufficient reward even for his life's labour. He thanked them sincerely for coupling his name with the toast.

Mr. J. ABSON (Sheffield) submitted the "Board of Examiners," adding that they needed their commendation and respect for the onerous duties laid upon them. They were called upon to leave their practices, at times probably most inconvenient to them, they had to travel in the night, and nothing could be more tedious and tiring than examining students for so many hours at a stretch. Their pay, too, was not at all proportionate to their services, and he regretted that the funds would not permit of that increase being made which he thought their due. He coupled with the toast the names of Messrs. Woods and Wolstenholme.

Mr. WM. WOODS (Wigan), in responding, said he thought there had been some mistake, because the Examining Board was defunct, at any rate although they were *de jure* the examiners, *de facto* they were defunct until there was a re-election, and he had been told that his action on the question of docking would seal his fate as to re-election. If that were so he was not sorry, it would be a glorious death. When the re-election did take place, as he supposed it would in a short time, he fully expected to be left out in the cold, but it would be an evercherished memory, of which nobody could rob him, that he had been considered fit to be associated with such names as Fleming, Cox and Duguid. He had been an examiner for about seven years, and had done his best. He was pleased to say, in all sincerity, that he had seen a marked improvement in the class of student which had been brought before the examiners, it improved every year, and although the examiners had incurred a considerable amount of displeasure, or something approaching to enmity, from some of the powers that be he felt certain that the action which some of the members had taken, not of themselves but because they had been directed by the Council to take it, that would be productive of great benefit to the profession; and in bidding adieu to the latter as examiner he should give his meed of praise to the teaching schools. He believed they were never so efficient nor so well equipped as they are at present. Though the names of Dick, Spooner, and Sewell were rightly numbered amongst veterinary surgeons as giants in the profession, he believed that when history came to be written the names of Professors McFadyean and Williams would be placed above them. The examiners were found fault with, they always were, for having so many to please they were bound to clash with someone, and some of the faults, perhaps, ought really not to be laid at their doors. One of them was the passing of students for membership of the R.C.V.S. with only 45 per cent. of marks out of the maximum of 100, but as regards this the examiners had the instructions of the Royal College, and the examiner should not be blamed for that. He appealed to th

medical gentlemen present as to whether a newly fledged member of the medical profession knew his work thoroughly. It was impossible, he said, there was nothing but experience and time would enable a man to be thoroughly master of the subjects such as they had to deal with, and such as the medical profession had to deal with, and they must only expect from a newly fledged veterinary surgeon such knowledge as he has got, and not that he thoroughly knew his work. He had one little suggestion which he would like to make to the Council, and that was the division of the examination. It was, as they knew, divided into two sections—a written and oral examination. The written consisted of answers to six questions, the oral of a full hour's oral examination, but to each of those examinations were awarded an equal number of marks. He did not think that that tended to a fully efficient examination. The answers to those six questions ought not to rank equally with the answers to one hour's oral examination.

Mr. J. B. WOLSTENHOLME, who also responded, said reference had been made to certain inconveniences which an examiner has to put up with. Doubtless, there might be certain disabilities in having to leave the ordinary daily and local duties, but what position was there to which an honourable man might aspire which did not involve some sacrifice and impose certain responsibilities. As to that of examiner in their profession, the compensations far outweighed all inconvenience. The very fact of having to examine young men who had just received the latest and best teaching of the schools was in itself a high form of education for the examiner. Then there was that education which came from the privilege of close contact with other examiners—men eminent in their own and the medical profession, which had been alluded to eloquently by his colleague, Mr. Woods. In this connection he could not suffer to pass unnoticed the name of the late Mr. Woods, who was a veterinary surgeon of the highest type, and a genial, gentle, and judicious examiner. The system of examining the students at the centre in which they were taught afforded the examiner the advantage of change of scene, and this, coupled with the extreme courtesy and consideration extended to him by all with whom he was thrown in contact, went very far to make the position not simply endurable but one to be desired and worked for. Concluding, Mr. Wolstenholme thanked them for the kind manner in which they had coupled his name with this important toast.

Mr. E. FAULKNER in proposing "The President of the L.V.M.A." said: Messrs. vice-presidents and gentlemen, I esteem it an honour to have been asked to submit for your acceptance the next toast on the list, and in so doing feel it is only necessary to mention the fact of its being that of Mr. McKinna, the President of the Lancashire Veterinary Medical Association, to at once command attention and enlist your kindly feelings. I have had the pleasure of his acquaintance for some considerable time, and have begun to regard him not only as a professional brother but as a friend. At all times, I can assure you, he has shown a kind and gentle disposition, has been gentlemanly, courteous, and intelligent. To me he seems to have a mission—and that a life's work in endeavouring to aspire to the highest possible ideal of a veterinary surgeon's duty, in ministering to the wants and relieving the sufferings of such of the lower animals as come within the sphere of his labours. His diffidence when requested to accept the presidency of this Association, in my opinion, arose from the fact that he possesses an analytical mind, capable of introspection and self-examination, and I would far rather have him so than to have shown an overwhelming self-confidence—that great stumbling block to self-improvement so frequently asssociated with ignorance. In his election to the chair, we have one who is earnest, and will spare no effort to maintain the honourable traditions and prestige of the Association, and make it continue to be in the time to come as in the past a centre of usefulness for the dissemination of knowledge and mutual improvement. That being so, it devolves upon us—the rank and file—to do our part, which is comprised in the words "our duty" whose meaning you are as fully acquainted with as myself. Doubtless our President feels, as we do, that this large, enthusiastic, and pleasant gathering is a happy augury for the success of his year of office. I therefore, in all sincerity, raise my glass and ask you to join with me in drinking to the good health, happiness, and prosperity of our worthy President.

The PRESIDENT acknowledged in grateful terms his indebtedness to Mr. Faulkner for his very kind remarks.

Mr. J. B. WOLSTENHOLME gave the toast of "The Medical Profession." He said: Gentlemen, this toast is one which always gives me particular pleasure in having the honour to propose, and I desire to thank the members of this Association for having entrusted it to my care. Medicine and surgery are one and indivisible, whether applied to the needs of the biped or of the quadruped. The profession of medicine, which is partly a science, and partly an art, is, in my opinion, one of the most exalted in which a man may engage. It affords unbounded opportunities for the advancement of science and the general comfort and happiness of mankind. All the powers of the mind, the resources of courage and the marvels of manual dexterity, which a man can possess, may find scope and opportunity in this profession. Certainly the medical as distinct from the veterinary opens up a far larger field for work and usefulness. Gradually year by year this field is becoming more and more divided, with the result that advance is being made in every direction. Among the notable divisions is to be found that of public health. In this section of the work the veterinary profession are especially interested, because the public health is affected by those diseases which are communicable from animals to man, and those diseases which may follow the ingestion of certain foods and milk. The veterinary profession is taking especial care to train their students to be of service to the community in this respect, and unless a man is so trained and made familiar with the diseases of animals he cannot perform the functions properly. We aspire to be the trained experts to safeguard the community on these matters. The ordinary examination for our own diploma includes those subjects, and there are pathologists of the highest status amongst the examiners. We appeal to the medical profession that the skill and knowledge, which can only be acquired by prolonged veterinary training, may be aided by them to obtain its full measure of usefulness as a factor in the preservation of the public health. Gentlemen, I ask you to drink with me to the health of "The Medical Profession."

Dr. NIVEN, M.O.H., Manchester, in reponse, thanked them heartily for the honour they had conferred upon him in asking him to answer to the toast, and for the very able and kindly way in which Mr. Wolstenholme had proposed it. It was a very good sign for the future that there was such cordiality displayed by the veterinary profession to the medical profession, which, he was sure, was amply reciprocated, at any rate by every thinking man, and it had been a great pleasure and privilege to him to him to be present at their dinner and to meet so many distinguished men in the veterinary profession. He assured them he did not undervalue the magnificent work they were now performing. He knew that the veterinary profession had, especially in recent years, been making great efforts to supplement the general knowledge they had at all times possessed of the diseases of animals by a precise and good pathological knowledge, which was necessary to complement the other, and from what he had heard (he was sorry he could not speak from an intimate personal knowledge) from Dr. Delépine, who was eminently well able to speak on that subject,

he quite agreed that the veterinary profession were now attaining a very high position both scientifically and socially. They all knew, he thought, that the medical profession in Manchester had done ample justice to the veterinary profession so far as public health was concerned. From an early period of his arrival in Manchester one of his objects, along with their excellent veterinary surgeon, Mr. King, was to add efficiency to the staff of veterinary surgeons, and he thought he might say that he cordially co-operated with him in recommending the increase of staff in Manchester which they now possessed. Not only so but a step had been taken which, he thought, would be worth mentioning, viz., that their large fever hospital was supplied with milk guaranteed free from tuberculosis. Knowing the anxiety of the veterinary profession that this country's stock should, both for breeding and public health purposes, be healthy, and that the veterinary profession were anxious this forward step should be made, he thought he could claim kinship and sympathy in those advances which the medical profession were endeavouring to make in that direction. On the other hand it was strongly his feeling that in future very largely upon the veterinary profession would devolve the carrying out of public health measures in respect of cattle. The numerous problems and the great advance of knowledge which was being made would afford ample materials for medical officers of health in which to exercise their faculties, and would also enable the rising generation of veterinary surgeons adequate opportunity to use the new knowledge they were acquiring, and he thought the future very largely belonged to them in the prevention of those diseases which were communicable from cattle to man. He would be very glad to see a public veterinary service, especially in this country, in close association with the medical officer of health.

Mr. SAM LOCKE, in proposing "The Visitors," including the other veterinary societies, said Lancashire was proverbial for its hospitality, and he felt sure the Lancashire V.M.A. would uphold that tradition. They were always pleased to see visitors at their festive board and at their ordinary meetings. To-night they had been favoured with a good many visitors, some distinguished ones, viz., Dr. Niven, M.O.H., Manchester, and Dr. Annis, the Huddersfield M.O.H. They had also their friends from Yorkshire and Eastern Counties V.A., and in the name of the Association he extended a cordial welcome to all the guests.

Mr. W. SHIPLEY, JUNR., (Hon. Sec. of the Eastern Counties V.M.A.), responding, said it was a great honour to acknowledge the toast of "The Visitors." He took a deep interest in veterinary medical associations, and he was pleased to have the opportunity of saying how they, in the Eastern Counties, were indebted to the Lancashire Association. His Association were few in membership and they had to depend on the Lancashire Association's support in sending a representative to Council, for which assistance they were more than obliged.

Mr. BARRON also replied. He was an old member of the L.V.M.A., and when the meetings were at Liverpool he was a regular attendant. He was glad to see that the Association was progressing in numbers and influence and to meet so many eminent men there. He came chiefly on account of their newly elected President, and he was pleased to see that they had been able to select a man of such ability. He had known him a considerable number of years, and greatly respected him as an honourable and upright member of the profession. He concluded by thanking him for their kind invitation which he had been able to accept, and by saying how much he enjoyed the evening's proceedings.

Dr. WOOD expressed his indebtedness for the magnificent hospitality and for the very kind way in which they had spoken of the medical profession. The two professions were inseparable. The medical depended on the veterinary for many things which the former were unable to find out. At present there was a very close association between the professions, closer, perhaps, than ever before. The pathological society could not prosper without the help of the veterinary profession.

Mr. CLARKSON also replied briefly, and the toast of "The Ladies" having been given by Mr. Noar, and acknowledged by Mr. Harry Locke, the proceedings, which were enlivened by the Doric quartette party, terminated.

NATIONAL VETERINARY ASSOCIATION.

A meeting of the Provisional Committee of the above was held at the Queen's Hotel, Leeds, on February 16th. Mr. J. Cooke in the chair, when 16 members were present and apologies received from 10. The minutes of the last meeting were passed.

Mr. COOKE'S letter stating that Scarboro' was unsuitable for meeting was discussed, and Mr. Clarkson proposed, and Mr. Snarry seconded, that the meeting be held in Leeds, which was carried.

It was left to the President and Secretary of Provisional Committee to make the necessary arrangements for Leeds.

It was proposed by Mr. Scriven, and seconded by Mr. Thompson and carried, that the former resolution of the Provisional Committee "inviting ladies to dinner" be rescinded.

FRANK SOMERS (Leeds),
Sec., Provisional Committee.

ROYAL VETERINARY COLLEGE V.M.A.

The 252nd ordinary meeting of the Association was held in the New Theatre of the College on Friday, February 18th, 1898, at 6.30 p.m. Mr. R. W. Carless occupied the chair. There were present Mr. A. Miller, M.R.C.V.S., (visitor), Mr. R. W. Hall, M.R.C.V.S., (hon. sec.), and 55 members.

Mr. E. T. GOODALL, by the courtesy of P. E. Hoyland, Esq., M.R.C.V.S., Rotherham, Yorkshire, introduced two morbid specimens: (*a*) the tibia of a five-year-old mare showing an oblique fracture in its lower third, accompanied by a longitudinal fracture extending to the middle portion of its upper third. (*b*). The *os pedis* of a horse showing evidence of a transverse fracture about one inch above its inferior extremity. The two pieces of bone had become reunited, and presented a plain surface on the solar, and a well-marked fissure on the laminal surface.

Mr. R. W. HALL read a communication received from the Hon. Sec. of the National Veterinary Benevolent and Mutual Defence Society drawing attention to the advantages gained by veterinary surgeons who became members of that Society.

Mr. E. PEACEY then read an excellent essay on "Tetanus," setting forth in a clear and concise manner the present day views held with regard to that disease, and specially drawing attention to its prevention by the adoption of treatment by serum-therapy.

At the conclusion of this essay a very spirited discussion was opened by Mr. G. W. Bloxsome upon the paper read by Mr. H. W. Percy at the last meeting of the Association, necessitating the extension of the usual time of the meeting by an extra half hour.

The usual votes of thanks to the Essayist and Chairman terminated the proceedings.

C. RADWAY, *Assist. Sec.*

EXTRACTS AND NOTES.

REPORT ON RINDERPEST TO THE TRANSVAAL GOVERNMENT.

The following is a translation of the report handed to the Government by Drs. Danysz and Bordet, the French scientists, and Dr. Theiler, the Government Veterinarian, on their experiments on rinderpest, carried on at the Trial Station at Waterfall, Pretoria, from February 15th to June 15th, 1897, presented to the Government of South African Republic.

To the Right Hon. the State Secretary :—We have the honour to report to your Honour that our experiments with regard to the curing of and "salting" against rinderpest have up to the present been attended by such results as to warrant us advising that the method now being tried at Waterfall be applied by the farmers to their stock, and without any fear of only partial success. We believe that it is therefore useful, and even necessary, to publish a general review of rinderpest matters, and in particular :

1. Our valuation of the methods already adopted against rinderpest.
2. Our advice with regard to the method which we think should be used for combatting rinderpest.
3. Definite instructions as to the application of this method.

Methods of Inoculation Hitherto Employed.

1.—The Waterberg Method.

At the time of our arrival at Waterval (at the end of January, 1897), the only method of inoculation against rinderpest which was made use of was that known as the Waterberg or Grobler method. This process consists of the making of a mixture of blood, gall, and the watery substance (*zucht*) from the abdominal cavity, or peritoneal fluid, and letting this mixture stand from one to three days; of steeping in this liquid woollen wads cleansed from all greasy substances, and putting these wads under the hide of the animal. Inoculation in this way takes place two or three times after an interval of from nine to fifteen days and even later. This process was subjected to endless improvements, each one improving it after his own fashion, and it was generally very difficult to know what were the ingredients of the mixture and in what condition it was made. What we are able to say about this to-day is that the method was attended by varying results. In some instances all the inoculated animals succumbed after from ten to twenty days after the inoculation, in others the mortality was from ten to 95 per cent., and in the remaining instances the inoculation seemed to have no result—the animals were not sick and thus were probably not salted.

Inoculation with Gall.

Dr. Koch, in his report to the Cape Government, sent from Kimberley on the 10th February, speaks of two important facts :—

1. That 100 c.c. serum from a salted animal is a preventive against a small quantity of virulent blood of an animal suffering from rinderpest.
2. Healthy beasts injected with 10 c.c. gall, taken from an animal that has died from rinderpest, will offer a stubborn resistance to the disease six or eight days after the inoculation.

We shall refer later on to the first point, as far as the serum from healthy beasts is concerned. With regard to gall, since the publication of the report thousands of animals have been inoculated with gall, and the following facts have been ascertained :—

1. In some cases the gall is as an actual infectant, and infects the inoculated animals with a deadly disease.
2. The gall may produce a mild disease, and thus the animals are salted.
3. The gall may be productive of no results, the animals not being sick. In this case the beasts are not salted after the inoculation.

Theoretically, inoculation with gall should frequently give perfect results, but in practice this method is attended by the same difficulties as the Waterberg method, although in a lesser degree. It can conduce to the spreading of the disease without affording perfect certainty as to the salting of the animals that have not become sick. It has been experienced that animals inoculated with gall may die of rinderpest within a month or two after inoculation. It can be generally noticed that an inoculation which causes neither immediate immunity nor a light disease, and in which the inoculative substance must be taken from dead or sick animals, will be attended with difficulty and danger in case of application to rinderpest. On the one hand there is always the risk of infecting the animals either at the time of inoculation or before they begin to become salted. On the other hand, it is not generally known if the animals that did not contract the disease are really salted. A rather important fact still remains to be commented upon. It appears to be certain that in case the animals contract the disease after from twenty to thirty days after the injection of gall, their disease is generally of a less serious nature than in the case of animals which have not been inoculated, and the former can be more easily cured with the blood of salted oxen than the latter. We, therefore, believe inoculation with gall must not be abandoned; on the contrary, whenever there is an opportunity of procuring gall in good condition (taken from an animal the moment it dies), this must not be allowed to slip, and healthy animals must be injected with it as far as it is possble to protect the inoculated beasts against contact with the disease during the first ten days. In case, however, the disease breaks out amongst the herd, inoculation with blood may be resorted to, and the sick or threatened animals will take a turn for the better. With regard to serum, Prof. Koch writes the following in the report referred to :—

"In my last report I was already able to inform you that blood serum from beasts that have recovered from rinderpest possesses a certain preventive property for healthy animals, when these are inoculated with it. Its preventive properties are, however, not considerable, because 100 c.c. of such serum is necessary to protect an animal against the inoculation of a small quantity of rinderpest blood. The salting process is in its nature a passive one, and will only be of temporary effect. The serum is not used for inoculation on a great scale.

Prof. Koch thus confirms the fact already discovered by Mr. Semmer about a year ago (Mr. Semmer has studied rinderpest in Russia), namely, that the serum of salted oxen possesses properties which render oxen immune from the disease, and he states at the same time that this immunity is only a passive one, affords only temporary exemption, and cannot be used in practice for salting purposes. Messrs. Theiler and Watkins Pitchford ascertained in December, 1896, that oxen inoculated with serum of salted beasts, and having withstood a quantity of rinderpest blood, become sick and may die, if subsequently brought in contact with diseased animals.

Inoculation by Means of the Blood of Salted Animals.

In our letter to the Government, dated 17th March, we wrote as follows :—

"In the matter of rinderpest it was our main object

to procure a serum which could be successfully applied to a herd in which the disease had already made its appearance, and where the employment of methods which brought on the disease in a light degree could only aggravate the condition of the animals already affected.

"The result can now be looked upon as attained, and the use of blood from salted animals, as procured by us up to the present, can be applied in practice if a number of salted oxen were placed at our disposal sufficient to supply the quantity of blood which would be required from us. We, therefore, ask your Honour to appoint a Commission, which, after having taken into account the value of the method, can take such steps as may be necessary to secure its application and make the method properly known."

The results we had obtained at that period were as follows:—

A. An injection of serum counteracts an injection made twenty-four hours later of a small quantity of virulent rinderpest blood.

B. A previous injection of active serum allows the animals to offer resistance to the disease which is conveyed to them by contact with affected animals.

On the 5th of April the Government intimated to us that Landdrost Schutte, of Pretcria, had been entrusted with the task of appointing a Commission empowered to regulate with us the practical application of the method.

The method which we have found to be the best for grappling with rinderpest in the already infected districts, has as its basis the principle of serotherapeutics, a principle, as is known, with which the world has been acquainted for many years, and which has been applied to several diseases with advantageous results.

In the main this principle is as follows: When an animal has suffered from a disease and then becomes salted, it is found that after a certain time certain substances are in its blood which, if in sufficient quantity, will prevent the animal contracting the disease again. In addition to this the blood of an animal so salted, when injected into healthy animals, enables them for a short time to stand the said disease, thanks to the useful substances contained in the blood of the salted animal. Thus healthy animals can be exposed to contact with the disease, after the inoculation with such blood. Owing to the protecting influence of the elements which are in the blood, it can be expected that these animals will only contract the disease in a light degree, which will, however, be sufficient to salt them for the future. To everyone who is acquainted with this important principle, it must naturally occur to apply it to rinderpest, and try to protect the animals against the epidemic by means of injecting serum procured from cured and salted oxen. Mr. Semmer made known in Russia that the serum of salted oxen protects the healthy oxen against rinderpest to a certain degree.

Shortly before our arrival in South Africa Messrs. Theiler and Watkins-Pitchford discovered the same properties in the blood. At Kimberley Professor Koch arrived at the same conclusion, but without ascribing to the serotherapeutic method that which we think is due. He declared it of less value than the process of salting with gall.

It must first be stated that the treatment of rinderpest by the serotherapeutic method, when adopted on a large scale, cannot be really successful unless one determines quite accurately the whole of the conditions under which this principle must be carried in effect. It is just this regulation to which we have devoted our attention. We will, therefore, proceed to give details of the same, because these several conditions and regulations must necessarily be known, if it is desired that this method of treatment with the blood of salted oxen shall be attended by good results, regularly and permanently.

Here follow the chief queries which arise in connection with this method, and the answers which we think should be given to each:

1. In what condition must the salted oxen be from which blood is taken for injecting healthy (raw) animals?

Firstly: When is the blood the most active? Must it be taken immediately after the cure, or a long time afterwards?

The experiments prove that the blood of oxen salted by rinderpest acquires strength shortly after the cure, but the maximum strength is reached about two months after the salting.

After the lapse of a pretty long time the animal still supplies blood of protecting properties, but of inferior strength.

The most advantageous time to take blood is from two (or from 1½) to five or six months, after the animal is salted from rinderpest.

Secondly.—It must be remarked that it must be recommended to take blood from those salted animals which showed the most distinct and even disquieting symptoms. Animals inoculated with gall, and which have shown no signs of rinderpest, must not be made use of.

A third point arises, and that is one of the most important: Is it desirable to make use of the blood from animals simply salted, or of the blood of such animals which were subject to treatment after the cure?

As already pointed out, the blood of salted animals possesses a very noticeable strength, generally about the second month after the cure. But it is recommended, before taking blood from them, to subject these animals to a preliminary treatment, consisting of injections of virulent blood procured from dead animals, or better still, from animals suffering badly from rinderpest.

This is to be recommended for two reasons: The injections with infected blood, even in considerable quantity, can have no injurious effect on salted animals, and an ox salted from rinderpest will never get sick again by injection of this blood. This injection proves whether the animal is really and truly salted and possesses full power of resistance against the virus. Further, the useful properties of blood from salted oxen are appreciably strengthened by previous injections to those animals of virulent blood. It is the oxen salted about two months previous, and which received two or more consecutive injections of infected blood, which have supplied us with the best working blood in our experiments. So, from the time of our arrival at Waterval in the beginning of February, we applied injections with infected blood on animals properly salted. Several oxen received a number of injections, and the strength of their blood appeared to be far above the average. A dose of 40 c.c. of such blood salts the oxen after immediate and permanent contact with rinderpest.

It is at present evident that it is difficult in practice to make exclusive use of blood from salted oxen which have been treated with infected blood. In many cases we shall be obliged to take blood from salted oxen two months previously, but which were never under treatment before. But it is clear that after a certain time the number of salted oxen treated with infected blood will increase, and that they will be almost exclusively used for the purpose of procuring suitable blood.

2. In what condition must the protecting blood be so that it can be injected?

The question must be put whether the blood must be used in its serum or defibrined condition? The answer is simple, because if a great number of animals are to be inoculated, it is necessary to use defibrined blood. The preparation thereof only causes the loss of a very small proportion of useful matter, while, if serum is to be prepared, a fairly large portion of the blood is removed. For these reasons we must accept that the inoculation with serum is almost unworkable in practice. Moreover the defibrined blood can be prepared with more accuracy

and expedition, which guarantees its purity. It takes a day before the serum is serviceable, and in that case it can easily be spoiled and thus contain noxious elements. The test has still further shown that of an equal quantity the working strength of defibrined blood is the same and probably greater than that of serum. On account of these reasons it is better to use defibrined blood. It must be injected immediately, and this blood cannot be kept longer than one day for injection, if strict precautions are not taken, which are difficult to apply in practice.

3. How must the animals under the influence of the counteracting blood be treated?

It is known that the blood of salted oxen does not give permanent immunity from rinderpest, but that animals injected with this blood acquire the property (but for a comparatively short time) of withstanding the attack of the disease more easily. If they are brought in contact with rinderpest after the injection with blood, they contract the disease, but recover, and become salted.

When the animals are already sick, or if they already possess the germs of rinderpest at the moment of injection, nothing else remains to be done than to inject blood to make the disease less serious for them. On the other hand, the animals that are not affected by rinderpest at the moment of injection must become infected, so that they can catch the disease in a light form, which the blood will help to get through, but which is also sufficient to thoroughly salt them. Rinderpest can be transmitted either by allowing the animals to mix with sick oxen or by injecting rinderpest blood, and it must be known which of the two means is the better. We are convinced from the trials that injection solely and exclusively developed through rinderpest blood cannot be regarded as good, as it is impossible, within the range of our knowledge, to apply it in practice in such a manner as to obtain good results.

The question immediately arises: Why? An ox is first injected with a sufficient quantity of preventive blood (taken from a salted ox that has recovered) and the following day with a small quantity of infected blood, i.e., 1/10 c.c. (1/500 part of the said quantity is sufficient to kill any beast that has not been subjected to any preventative), then it is seen the animal does not contract the disease. It does not show any visible symptoms of rinderpest; it may even be stated that at the identical time no increase in temperature takes place. So, a quantity of active blood from a salted animal prevents all infection by 1/10 c.cm. virulent blood. But bring the animal into contact with sick oxen a little later, a week after the inoculation, for instance, then it contracts the disease, and shows signs of fever at the identical time it receives this natural infection. However, the animal recovers from this attack if the previous injection of the curative blood has been sufficiently large and did not take place for too long a time. From the foregoing, it can be concluded that the animal was neither sick nor salted as the result of inoculation with this virulent blood. It is known for a fact that salted animals can be actually driven right amongst a herd suffering from rinderpest without showing afterwards either fever or the slightest trace of disease

The injection of small quantities of rinderpest blood in animals that have been previously inoculated with the blood of salted animals, is not sufficient to infect a beast in such a degree as to secure for them a continual salting after the cure.

The sickness, however, may be caused by considerably increasing the quantity of poisonous blood, or by decreasing more or less the dose of preventative blood, but then there would be the danger of the animal dying from the real rinderpest. To attain a good result, a carefully regulated quantity of blood must be injected, large enough to occasion a small degree of sickness, small enough to guard against serious sickness or death.

But the correct measure of such a quantity of infected blood cannot be determined in practice, as it depends on how much strength the preventative blood previously injected possesses. Two samples of preventative blood never have the same strength, and the estimation of their value would be a long and tedious matter, as the number of samples to be examined would be too considerable.

It happens differently with animals that have received an injection with preventative blood, and come into contact with rinderpest immediately afterwards. Such animals are not unsusceptible to this natural infection. They always get an attack of rinderpest which is not deadly, when the preventative blood used is good, but which is sufficient to well salt the beast. We may add that the beast still gets a slight attack of sickness if it has received a quantity of preventative blood considerably more (four times more) than that sufficient to prevent death. If a number of oxen are injected with 40 c.c. efficacious preventative blood and another lot with 160 c.c. of the same (four times as much), and the animals are brought into direct contact with the sickness, then those which have received 40 c.c. catch the disease, but recover, but with regard to the others high fever appears in the typical time, the fever lasting some time before entire recovery takes place. Such a proof demonstrates that even the quantity of preventative blood is greater than is necessary, the animal is exposed to continual contact, distinctly catches the disease, becomes cured, and is thus decidedly salted. Thus the animals suffer no inconvenience whatever by the injection of too great a quantity of preventative blood.

It can thus be seen that infection by means of contact is decidedly to be preferred to that occasioned by poison-blood alone. It allows for regular symptoms of a light sickness, entirely indispensable to the securing of a solid and lasting salting. The explanation of the difference in the results obtained by infection, either with the injection of poisonous blood or by immediate contact with rinderpest cattle, has more theoretical than practical interest, and we shall not follow out this matter at greater length.

We content ourselves with the observation that one of the most advantageous conditions of natural infection lies in the fact that instead of causing a sudden isolated infection, the contact causes a whole series of light consecutive infections. New tests not yet finished are necessary to study this question more completely. We do not wish to state that infection only by means of contact, which at the present is the best, should never be changed, and that it would never be necessary to introduce in it any innovations.

It is thus by means of contact that infection must be transmitted to animals injected with preventative blood. When must this contagion take place? It must be done when the animal is most under the influence of the salted blood; that is to say, so speedily as possible after the inoculation with blood—the same or the following day.

There still remains one point, with regard to the manner of treatment of the animals inoculated with the blood of salted beasts. That is to say, it must be known whether these animals must receive one or more injections with blood.

As we have seen from the above, the best working blood is procured from those animals which have been spontaneously sick and salted, and which were seriously sick and were inoculated with two or three injections (each of 100 c.c. rinderpest blood) during the 3rd, 4th, and 5th month after the salting. Thus granting that a single injection with blood of animals thus salted is sufficient to salt almost all the animals under treatment, in order to attain always the same results, two injections must be made of 100 c.c. blood of salted animals (taken not longer that five months after the salting) and which have not been previously treated with rinderpest blood.

The quantity of blood to be injected depends on :

1. Whether the beasts to be treated are still healthy, or
2. Whether they are already sick.

In the first case, when the animals are still healthy, the quantity injected must be the same as mentioned above.

In the second case, when the animals to be treated are already sick, they must be injected two or three times oftener than the healthy animals—according to the severity of the disease.

As it is impossible to determine beforehand the exact condition of all salted animals, we strongly advise that at least two consecutive injections, each 100 c.c., be made, an interval of from five to six days being observed between each.

3. May the animals treated according to our method serve for the inoculation of others ?

One decided advantage of this method lies in the fact that animals salted according to it can help other oxen with their blood. Owing to this circumstance, the number of animals suitable for furnishing a supply of inoculative matter will be soon quite sufficient, and still increase afterwards. With regard to this kind of animal, it will be worth while making a few observations to show how a sufficiency of strong, preventative blood can be obtained from such animals.

In a herd inoculated with blood, brought into contact with the rinderpest immediately after the inoculation, the disease will appear in a light form, and the whole herd, or the largest portion thereof, will be cured. But all animals will not contract the disease in the same degree.

Those animals which are to be selected for bleeding purposes must be picked out of those which were the most dangerously sick, that is to say, those which showed the most visible symptoms of rinderpest. After their recovery these animals should regain the signs of of their former health, and should not remain too thin and weak. When the animals have sufficiently recovered they have to receive one injection with rinderpest blood, which should subsequently be repeated. After a month and a half or two months these animals are suitable for supplying preventative blood, and may be bled fifteen days after the last injection of virulent blood. The bleeding process can be repeated several times, after which it is advisable to make a fresh injection with rinderpest blood. These oxen may be serviceable for five months after the time of salting.

Where must the application of the method first take place ?

As the method of inoculating with blood offers immediate resistance against rinderpest, and even provides for the treatment of animals suspected to be affected, it will be advisable to first of all apply it at the farms where the plague has already made its appearance, or where it threatens to break out. Subsequently, after the number of salted beasts has been increased by a series of inoculations, plans can be made for further application of the treatment. In every case it will be advisable to conduct the treatment by means of rinderpest blood of salted beasts, in order that they may be afterwards made use of against a further spread of the disease.

Conclusion, Containing General Rules for the Application of the Method.

It appears from the whole of our observations that, in order to grapple with rinderpest in an efficacious manner, one has to consider the condition of the animals that will provide the inoculative matter, and of the oxen to be treated.

For the purposes of procuring blood, those animals must be bled which have contracted the disease in its most severe form, and which have been salted one to five months previously, and have received at least one injection of rinderpest blood. Such animals are the best.

However, in case it is impossible to procure animals so treated, and the immediate inoculation of a herd threatened with rinderpest has to be proceeded with, blood may be obtained from oxen salted from one month and a-half to three months, which have received no rinderpest blood.

This blood must be used in its defibrined state.

The animals to be inoculated must be treated in two different ways, according to whether they are still healthy or already sick.

1. First injection with blood from a salted animal.
2. Let the inoculated animals mix with the sick oxen at the time of the first injection or on the following day, and let the animals under treatment remain for some days more in contact with the sick oxen.
3. The second injection of 100 c.c. salted ox blood five days after the beginning of the contact. For instance, if the first injection is made on July 1st, and on the 2nd the oxen are brought in contact with the sick animals, then the second injection must be made on the 7th of July.

The sick animals must receive from two to three times more blood from a salted ox than healthy animals.

It will never be dangerous to inject even large quantities of curative blood. The quantity of blood from a salted ox to be injected into a sick animal depends on the seriousness of the disease. The worse the animal is affected the more must be used to effect the cure.

With regard to animals that have shown visible signs of rinderpest for one or two days, it is advisable to make an injection of 200 to 300 c.c. immediately ; this can be repeated one or two days later according to the seriousness of the disease.

When there is plenty of blood at one's disposal, one need not be afraid of making a few more injections. If, however, there is not very much blood, and some of the oxen are very ill and others only slightly affected, it is better to use the blood of those animals that are only slightly affected. In that case it is advisable to bring only a limited number of oxen under proper treatment, that is to say, to give a sufficiently large dose to each animal, rather than only half-inoculate a large number ; in fact, if a large number of sick animals are treated for cure by means of an insufficient quantity one runs the risk of losing nearly the whole lot.

Animals previously inoculated with gall which subsequently become sick can also be treated by means of blood from salted oxen.

We confine ourselves here to noticing the principal rules ; more exact iustructions with regard to the practical application of the method appear at the end of this report.

It must here be observed that the whole visible symptoms of rinderpest do not appear earlier than eight days after infection. Thus those animals injected with preventative blood and brought into contact with sick animals must show visible signs of rinderpest seven or eight days after infection.

In case, however, a certain number of animals treated sicken two, three, or even five days after they have come into contact, it must be concluded that these animals were already affected at the time of injection, and allowance must duly be made when surveying the results.

General Rules for Combatting Rinderpest.

In the beginning of the year 1896, rinderpest made its appearance in Matabeleland and Mashonaland, and in less than eighteen months it had destroyed the cattle of these two countries, and had also overwhelmed the territory of the South African Republic and the Orange Free State. It is at present spreading from north to south, and from east to west, and seriously threatens

the herds of the Cape Colony, Basutoland, Natal, and Zululand.

Owing to the protective measures adopted by the Governments of the South African Republic, Orange Free State, and the Cape Colony, the spread of the disease has been less rapid ; but it is to be feared that the whole of the steps taken will not be strong enough to withstand its inroad, and that slowly, but surely, the epidemic will conquer the whole of South Africa.

Granting, what is very probable, that two or three years hence there will be some *foci* of rinderpest in the South and West, and those parts inhabited by natives, then it may spread afresh in other directions, and affect a new generation born after the epidemic, and therefore not salted. So if general measures are not jointly taken to-day throughout the whole of South Africa there will be great danger that we shall never see the end of this disease.

It is thus in the interests of all the countries of South Africa to take the steps necessary to prevent the possible return of rinderpest, and in order to do this it appears to us to be necessary to hold a congress in which all the countries interested should be represented.

We therefore propose to you to convene a congress at which shall be represented the Governments of the South African Republic, Orange Free State, Cape Colony, Zululand, Natal, and Portuguese Possessions, etc.

Instructions.

Procuring the blood.

Manipulation of the instruments.

A. Take an enamelled pan with a capacity of from 6 to 10 litres (about 10 to 12 bottles).

B. Fill this pan (three-fourths up) with clean cold water, and put in it :

1. The trocar, with which the animal is to be bled.
2. The knife or scissors for cutting the skin.
3. A brush made of iron-wire for defibrinating the blood.
4. The syringes and needles for the injection of the blood.

C. Set the pan with all the above-mentioned instruments in it on the fire and let the water boil for a quarter of an hour.

After the animal is laid down and tied fast, a rope must be put round the under part of the neck and pulled tight. The jugular vein, from which the blood must be taken, then becomes thick and clearly visible.

Feel with the finger the place where the vein is to be found, wash with soapy water, cut right through the skin with the knife or scissors (that have been put in the boiling water) without, however, touching the vein itself, and insert the trocar from below to above in the direction of the head.

The incision must be made above the rope that has been tied around the neck.

Then let the blood run into the pan containing the water that has been boiled, after the instruments and the water have been taken out and the pan itself has become cool, the blood being stirred the while with the iron brush.

After a sufficient quantity has been obtained (from a large full-grown ox four litres, that is six bottles, can be taken without doing any harm), the trocar must first be pulled out with a quick movement, and after that the rope around the neck may be slackened.

If the rope around the neck is loosened first, before the trocar has been pulled out, the danger is incurred of air getting into the vein, and the salted animal dying therefrom.

You must, therefore, never forget to first remove the trocar and then loosen the rope around the neck.

After bleeding, tar must be plastered on the wound.

The blood in the pan must be slowly stirred with the iron brush for fifteen to twenty minutes. When the particles of solid matter have been separated from the liquid the whole must be poured through a linen cloth or sieve ; the blood thus prepared can then be injected.

None of these operations must take place in the sun.

All the instruments must be cleansed with cold water after use, and after that thoroughly dried.

The blood must be injected the same day that it has been obtained and prepared.

The same method must be adopted with regard to bleeding, stirring, and injecting the blood to be injected into salted beasts, as with regard to the blood from salted animals which is to be injected into oxen that are to be salted.

How to Prepare Salted Oxen for Use.

One month after salting, the salted oxen must be injected for the first time with 100 c.c. rinderpest blood, and, if possible, a second time after fifteen days from the first injection.

An ox treated in this manner can be bled for the first time fifteen days after the last injection of rinderpest blood, and this can be repeated for from eight to twelve times at intervals of from six to eight days.

Salted oxen from which blood is taken must be well fed and looked after ; if they become thin, no more bleeding must take place.

INOCULATION.

Healthy Beasts.

1. A first injection of 100 c.c. blood to each animal.
2. The inoculated animals to be brought in contact with the sick, or, if possible, infected by spreading on the nose the contents of the bowels of an animal that has just died of rinderpest. The contact must be kept several days.
3. A second injection of 100 c.c. five or six days after infection.

Sick Animals.

Animals already sick must be injected for the first time with 200 to 300 c.c. blood from salted animals, and two or three days later there must be a second injection from 100 to 200 c.c. blood should the animal not get better

To be thoroughly salted, the animals must become sick and recover.

But it may happen that out of a herd brought under treatment, a certain number of animals become sick only after from twenty to thirty days after the injection, that is to say, at the moment that the animal loses from its body the blood which should protect it from the deadly disease.

In those cases a fresh quantity of 100 to 200 c.c. blood from salted animals must be used for injection of these animals in order to cure them and thoroughly salt them.

It remains to be observed that a certain number of animals treated may die during winter from cold or insufficient food.

It is therefore advisable during the period of from six to ten days, while the sickness may last, to feed them on green forage.

Rouget.—The Paris correspondent of *The British Medical Journal* says :—"M. Brücker has discovered the species of acarus which causes the autumnal eruption called *rouget* (the measles of pigs). *Rouget* is the larva of a large bright red acarus, the trombidium gymnopterorum ; formerly it was attributed to the holosericum, the larva of which never attacks the human subject.

DAMAGES FOR BREACH OF FAITH.

At the Petworth County Court his honour Judge Martineau was engaged for some time in hearing a claim brought by Walter Dawtrey, horse dealer, &c., of Petworth, against William Ernest Watson, a Lieutenant in the Carabineers, stationed at Aldershot, for £20, damages caused by injuries to a horse while it was in charge of defendant.—Mr. Pitman (instructed by Messrs. Mant) appeared for plaintiff, and Mr. H. J. Randolph (instructed by Messrs. Arthur Newton and Co., of London) for defendant.

Plaintiff stated that in October last defendant and a young gentleman called on him with a view to buying a horse. Some animals were taken out and tried at jumping and galloping, but no deal was then made. Defendant, however, asked that a certain horse might be sent to Aldershot for the Colonel of his regiment to see, but witness refused to let it go away as he thought he had a customer for it nearer. Witness said he did not mind as long as the horse was not jumped, but eventually he refused to let it go. Subsequently defendant wrote asking again for the horse to be sent to Aldershot and offering £5 for allowing it to come, but witness did not forward it. Defendant afterwards came to Petworth with two friends and said he was almost sure the animal would be passed by the officer, if allowed to go to Aldershot, and again promised not to gallop or jump it. On the following Monday the horse was sent to Aldershot and was returned on Wednesday, when witness noticed a very bad cut on the off foreleg just above the fetlock joint. Correspondence passed between witness and defendant, in the course of which the latter said he did notice a small wound in the fetlock joint caused when the horse was jumping. Witness asked 120 guineas for the animal, and its value had considerably decreased owing to the cut.—In cross-examination, plaintiff denied that the suggestion at the first interview was that the horse should be sent to Aldershot to be examined as a charger and hunter. A question arising as to the present condition of the horse, plaintiff offered to "go and bring him ; he is outside."—His Honour (astonished) : What, bring him in Court? (Laughter).—Cross-examination continued : The animal was not fit to be used again till February 4th when he went hunting and overreached himself in the near fore-leg. When defendant came to witness first he was told that the animal was a good jumper and hunter.

Thomas Jacobs, head groom to plaintiff, gave corroborative evidence as to the conversation which took place between the parties at the first interview.

Mr. C. Duke, farmer, of Hardham, who was also present on that occasion, having been called, Mr. William Gridley, of Petworth, a member of the Royal College of Veterinary Surgeons, stated that he examined the horse when it came back from Aldershot, and gave a certificate to the effect that it was suffering from lameness due to an incised wound on the fetlock, the cut no doubt having been caused by an over reach. The horse, he further certified, would not be fit to be offered for sale for about a month, and the injury might result in a permanent blemish. He had seen the horse that day and it now had a scar on the spot where it was wounded.

Mr. R. Dawtrey, M.R.C.V.S., of Chichester, said that he examined the horse on November 4th, and it had a wound extending from about half an inch above the fetlock down to the heel.—Cross-examined : Witness was a cousin to plaintiff. The injury was a deep cut or scratch which might have been caused by an over-reach.

His Honour, before the opening of the defence, pointed out that in the correspondence which passed defendant was charged with a breach of faith in having the horse jumped, and he did not deny it.

Defendant then went into the box, and he stated that there were conditions asked by the defendant when he sent the horse to Aldershot, but he did not promise to carry them all out. He, however, did agree not to gallop the animal, and carried out that promise. The horse was offered as a good jumper, but after seeing him tried at the regimental jump, which was three feet high, witness decided to have nothing more to do with him. After it had been tried witness noticed a slight oblique scratch on the inside of the fetlock of the off fore leg. He considered that the animal was given a fair trial, and that was the reason why he did not reply to the charge of breach of faith.—In cross-examination defendant said he did not attach any serious importance to the charge of breach of faith, although it was brought in two letters.

Captain Barry, regimental veterinary officer to the Carabineers, having given evidence as to the interviews which took place between plaintiff and defendant, at which he was present, stated that the wound which the horse sustained at Aldershot was so simple a one that he did not order any treatment, and told defendant that it was fit to go back to Petworth. He had seen the animal that day (Thursday), and the wound which had been pointed out to him in the off fore leg was not the same one as was sustained at Aldershot. He did not consider that the value of the horse had depreciated owing to the injury. He had held his present position at Aldershot for 14 years.

Mr. R. H. Collis, who tried the animal at Aldershot, stated that it was not a good jumper, and Capt. Elworthy who witnessed the trial, said it jumped more like a cow than a horse (laughter.)

His Honour eventually gave judgment for plaintiff for £10 10s. with costs.—*Brighton Argus.*

CONVICTION OF "A VETERINARIAN."

At the Huddersfield Borough Police Court, on Wednesday, Feb. 16th, before F. Greenwood (in the chair), J. Lowenthal, and C. Glendinning, Esqrs.

William Sharpe, of Rastrick, Brighouse, was required to answer a charge of having committed a breach of the Veterinary Surgeons Act, 1881. Mr. F. A. Reed prosecuted, and Mr. R. Welsh defended.

The former said he was instructed by Messrs. Barker and Oliver, of Brighouse, to conduct these proceedings for the Royal College of Veterinary Surgeons. He pointed out that under the charter of that college only members on the register were entitled to hold themselves out to the public as veterinary surgeons, and anyone doing so and not being qualified was liable to a penalty of £20. The defendant was a manufacturer of cattle spice, and on the 11th January sold to Fred Hirst a packet of spice, and gave him a bill, in which defendant was described as "W. Sharpe, veterinarian, Huddersfield Road, Rastrick, Brighouse." The packet also bore the same description. On reference to the dictionaries, he found that it implied "one skilled in the diseases of cattle" (Johnson). That was in 1818. Gradually the word had become rather more well-known, and in Webster's dictionary the definition was plainer: "One skilled in diseases of cattle or domestic animals; a veterinary surgeon." The latter, Mr. Reed contended, was the modern acceptation of the term, and the Bench had to consider what people who read the word over the defendant's shop would infer from it.

Fred Hirst, groom, corroborated what had been stated by Mr. Reed in regard to the words on the defendant's bills, and also as to his authority for taking proceedings.

Mr. Welsh raised an objection on the ground that the sealed document produced was not sufficient proof of the authority of the college to prosecute. Mr. Mills (magistrates' clerk) thought the objection was invalid. Mr. Welsh suggested that "veterinarian" was simply a

word describing a vendor of cattle foods; and a rather long argument followed between the legal gentlemen engaged in the case, after which Mr. Mills expressed the opinion that the word came within the scope or intentions of the Act.

Police-constable Oakes was called as a witness, and stated that on the day in question he was in the Cattle Market, and noticed the defendant's stand, which contained a bill bearing the words, "William Sharpe, veterinarian, Brighouse."

For the defence, Mr. Welsh urged that his client, who pleaded not guilty, had sold these animal foods for thirty years. If he liked he could have been admitted a member of the R.C.V.S. as soon as the Act was passed, but as he did not then get his living solely by the sale of these foods, he did not make application until 1896, when he was told that he should have applied earlier. If he had offended, he had done so in ignorance. Mr. Greenwood (from the Bench): He has declined to legalise himself for thirty years? Mr. Welsh: It was not necessary. The case, continued Mr. Welsh, was not a bad one, and he hoped the Bench would inflict a small penalty if they decided to convict.

After a few moments' discussion, the Magistrates decided to fine Sharpe 40s. and costs, the latter to include the prosecuting advocate's fee.

The Medical Council and Unqualified Assistants.

For some time past the question of the employment by medical men of unqualified assistants has been engaging the attention of the General Medical Council, and a circular has now been forwarded to the whole of the medical practitioners of the metropolis. This order states that the "substitution of the service of an unqualified person for those of a registered medical man is in its nature fraudulent, and dangerous to the public health," and the Council give notice that "any registered medical practitioner who is proved to have so employed an unqualified assistant is liable to be judged as guilty of 'infamous conduct in a professional respect,' and to have his name erased from the medical register under the 29th Section of the Medical Act of 1858." Further, in regard to the practice commonly known as "covering," the Council gives notice that any registered medical practitioner who knowingly enables an unqualified or unregistered person to engage in medical practice as if the said person were duly qualified and registered, is liable to be judged guilty of "infamous conduct in a professional respect, and to have his name erased from the medical register under the said enactment."—*Daily Telegraph.*

Lame after purchase—Action to recover.

At Worcester Assizes, before Mr. Justice Day, was tried Shipway *v.* Broadwood, an action to recover £200, the price of a pair of carriage horses, which a jobmaster of Worcester alleged had been sold to the defendant, an independant gentleman at Malvern Wells. The horses were taken to the defendant's residence and tried in his presence, and he said he would pay the sum mentioned if they were passed as sound by a veterinary surgeon. They were passed by him, and the horses were sent to plaintiff, who forwarded a cheque, but then he telegraphed to say that one horse was lame, and stopped the cheque. The V.S. admitted that he was to have a present from plaintiff if the horses were sold. The Judge characterised this as a detestable practice. Witness also admitted that he had reported against other horses which he had inspected on behalf of the defendant. Plaintiff's case was that something must have happened after the sale was effected. Ultimately a verdict was given for the plaintiff.

The Spread of Glanders.

Mr. Long received, at the Board of Agriculture, on Feb. 15th, a deputation, representing Glasgow and the county of Lanark, asking for further powers for local authorities, enabling them to apply the Mallein test to horses in the case of outbreaks of glanders, with a view to preventing the spread of the disease, and also for the licensing and registration of stables in a manner similar to that in which cowsheds are dealt with. Mr. Long, in his reply, said it was becoming increasingly desirable that inspectors representing local authorities should have their whole time free to devote to their work of inspection, this being true in regard to the higher creation as well as lower animals. With regard to the application of the Mallein test, the Board was now having experiments with this, and would give the whole question its careful attention with a possible view to regulations being made for the whole country.—*Daily Chronicle*, Feb. 16th.

ARMY VETERINARY DEPARTMENT.

At the Levée held at St. James' Palace on the 21st February, by his Royal Highness the Prince of Wales, Vet.-Col. F. Duck, C.B. was presented by the Commander-in-chief on appointment as Director General, Army Veterinary Department, after which Vet.-Colonel F. Duck presented the following officers: Vet.-Major D. C. Pallin on promotion, Vet.-Lieutenants J. S. Wood, W. A. Wood, D. Bolton, and R. C. Moore.

Vet.-Lieut. J. A. B. McGowan joined at Aldershot for duty on 21st instant.

The undermentioned veterinary officers arrived from India on completion of tour of service in that country: Vet.-Major J. Bostock, 12th February; Vet.-Lieuts. C. Rose and H. J. Axe, 17th February.

CORRESPONDENCE

THE SANITARY INSTITUTE CERTIFICATE.

Sir,

In your issue of February 19th an editorial note headed "Sanitary Institute Certificates" caught my attention.

In the article you say "veterinary surgeons are now beginning to recognise the fact that the possession of the Sanitary Institute's certificate, in addition to the M.R.C.V.S. or F.R.C.V.S. degree, will materially improve their chances of appointment as inspectors of meat, cowsheds, etc."

Veterinary education has advanced considerably during the last ten years, and surely with such a College curriculum as we have at present a graduate of the R.C.V.S. ought to be sufficiently well versed in matters hygienic to be above a certificate of the Sanitary Institute as a qualification for the post referred to. His knowledge of animals, their diseases, and post-mortem conditions need scarcely be discussed.

Knowledge, however gained, should by no means be despised, but I cannot understand how a V.S. can materially improve himself by the course of instruction—postal or otherwise—that is to be followed to obtain the certificate of the Sanitary Institute.

After all the exhortations we have received during the last few years, to uphold the dignity of the veterinary profession, and after our constantly reiterated claims of sisterhood to the medical profession, it certainly appears to be a decided climb down for a M.R.C.V.S. to have to resort to such a course to obtain an appointment as inspector of meat, etc.

I could understand an agitation in the profession, having in view the desirability of obtaining a veterinary public health degree, but fail to see the advantages to be derived from the certificate of the Sanitary Institute.—Yours truly,

JAMES KING, M.R.C.V.S.
Chief Vet. Inspector for City of Manchester.

[We quite agree with Mr. King that the education indicated by a veterinary diploma is of much higher value than that shown by a certificate of the Sanitary Institute. But just as our diploma does not include all that a sanitary inspector requires, so their certificate includes some subjects not embraced by our diploma. For certain appointments the law requires the sanitary certificate and does not recognise the veterinary diploma, hence if a veterinary surgeon desires these special offices he does well to add the certificate to the diploma.—ED.]

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Messrs. G. Thatcher, J. A. Todd, H. J. Dawes, Mr. Wallis, G. Mayall.

Journal of Comparative Medicine, Clinical Diagnosis of Lameness in the Horse, A Handbook of Horse-Shoeing, Farmers' Gazette, Meyers Observer, The Huddersfield Daily Chronicle, The Dumfries and Galloway Courier.

Veterinary Societies—Addresses.

Alterations for this list must be duly notified by the Secretaries

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Meetings, 1st Thursday in March, June, Sept., & Dec.

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Meetings, Second Thursday, Feb., June and October

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Meetings, Second Friday in Feb., & May. Second Tuesday in August, November

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Meetings, Third Friday, Feb., May, Aug. and Nov.

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Meetings, Last Friday, Feb., June and Nov.

ROYAL SCOTTISH V.S.
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Hon. Sec: Mr. W. D. Fairbairn, M.R.C.V.S., Cupar, Fifeshire

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Pres: Prof. Hobday.
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Assist. H.S. Mr. C. Radway, R.V.C., Camden Town, N.W.

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Hon. Sec: Mr. P. Moir, M.R.C.V.S., 9 Kilmain Terr. Edinbro'

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Pres.: Mr. H. H. Roberts, M.R.C.V.S., Bishop Auckland.
Hon. Sec: Mr. W. Awde, F.R.C.V.S., Stockton-on-Tees.
Meetings, First Friday, Mar., June, Sept. and Dec.

SOUTHERN COUNTIES V.M.S.
Pres: Mr. J. T. King, M.R.C.V.S, Bournemouth, Hants
Hon. Sec: Mr. C. Pack, M.R.C.V.S., Lymington, Hants.
Meetings, Last Thursday, Mar., June and Sept.

SOUTH WALES AND MONMOUTHSHIRE V.M.A.
Pres: Mr. J. L. Perry, M.R.C.V.S., Cardiff
Hon Sec. Mr. D. G. Davies, M.R.C.V.S., High-st, Swansea
Treas. Mr. E. Sayer, M.R.C.V.S., Newport, Mon.
Meetings First Thursday in March, and Autumn.

WESTERN COUNTIES V.M.A.
Pres: Mr. Wm. Penhale, M.R.C.V.S., Holsworthy, Devon
Hon. Sec: Mr. John Dunstan, M.R.C.V.S., St. Mellion, Cornwall
Meetings, Third Thursday, March and September.

WEST OF SCOTLAND V.M.A.
Pres: Dr. James McIntosh McCall, Vety. Coll. Glasgow
Hon. Sec & Treas: Mr. Hugh Begg, M.R.C.V.S., East Kilbride

YORKSHIRE V.M.A.
Pres Mr. W. F. Greenhalgh, M.R.C.V.S., Brunswick Terrace, Leeds
Hon. Sec; Mr. A. McCarmick, M.R.C.V.S., Kirkstall-rd, Leeds
Meetings, Last Friday in Jan., April, and October.